(1) Supreme Court, U.S.
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No. 00-

IN THE

Supreme Court of the United States

AMERICAN IMAGING SERVICES, INC.,

Petitioner,

v.

INTERGRAPH CORPORATION,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Whether the United States Court of Appeals for the Federal Circuit is determining issues not made the subject of Motions for Summary Judgment in a manner which conflicts with the decisions of this Court and the Federal Rules of Civil Procedure as interpreted by all other circuit courts of appeals.

2. Whether the Rulings of the United States Court of Appeals for the Federal Circuit has mixed standards and procedural rules in such a way as to violate a patent litigant's fundamental right of due process by preventing a meaningful presentation and record for the Court of Appeals for the Federal Circuit to consider in reviewing summary judgment issues reliant upon *Markman* hearing determinations.

LIST OF PARTIES AND CORPORATE DISCLOSURE STATEMENT

The caption correctly lists all parties to the proceedings below. There are no parent companies or publicly held companies that own ten percent (10%) or more of American Imaging Services Inc.

TABLE OF CONTENTS

	Page
Questions Presented	i
List of Parties and Corporate Disclosure Statement	ii
Table of Contents	iii
Table of Cited Authorities	v
Table of Appendices	vii
Opinions Below	1
Statement of Jurisdiction	1
Constitutional Provision Involved	1
Statutory Provisions Involved	2
Statement of the Case	2
A. Course Of Proceedings	2
B. Statement Of Facts	3
C. Claim Construction	4
Reasons for Granting the Writ	5

Contents

Page

I. The Actions Of The Court Of Appeals In Deciding This Summary Judgment Appeal Has So Far Departed From The Accepted Manner Of Such Proceedings As To Call For This Court's Supervising Power. 6

II. The Determination Of An Unraised Summary Judgment Issue Is Contrary To This Court's And Federal Circuits' Own Holdings. 9

III. The Manner Of Treatment Of This Summary Judgment Is Such A Departure From Traditional Principals Governing Appellate Determination As To Require Settlement By This Court. 11

IV. The Court Of Appeals Has Decided This Appeal From Summary Judgment In A Way That Directly Conflicts With Relevant Decisions Of This Court. 12

Conclusion 14

TABLE OF CITED AUTHORITIES

Page

Cases:

Boggs v. West, 188 F.3d 1335 (Fed. Cir. 1999) ... 9

El Paso Natural Gas Co. v. Neztsosie, 526 U.S. 473 (1999) 9, 10, 12, 13, 14

Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360 (Fed. Cir. 2000) 10

Ethicon Endo-Surgery, Inc. v. United States Surgical Corp., 93 F.3d 1572 (Fed. Cir. 1996) 10

Fireman's Fund Insurance v. U.S., 909 F.2d 495 (Fed. Cir. 1990) 11

Fountain v. Filson, 336 U.S. 681 (1949) 6

Hormel v. Helvering, 312 U.S. 552 (1941) 9

Kennedy v. Silas Mason Co., 334 U.S. 249 (1948) .. 6

Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996) ..... i, 4, 7, 8, 10, 11

Pitney Bowes v. Hewlett-Packard Company, 182 F.3d 1298 (Fed. Cir. 1999) 10

Poller v. Columbia Broadcasting System, Inc., 368 U.S. 464 (1962) 6

Cited Authorities

	Page
Seal-Flex, Inc. v. Athletic Track & Court Construction, 172 F.3d 836 (Fed. Cir. 1999)	12
United States v. Diebold, Inc., 369 U.S. 654 (1962)	6
Statutes:	
28 U.S.C § 1254(l)	1
28 U.S.C. § 1331	
28 U.S.C. § 1367	2
28 U.S.C. § 1338	2
35 U.S.C. § 102	2
35 U.S.C. § 103	2
United States Constitution:	
Fifth Amendment	1
Rule:	
Fed. R. Civ. Proc. 56	11
Other Authority:	
Wright, Miller & Kane Federal Practice and Procedure: Civil 3d § 2716	6

TABLE OF APPENDICES

Page

Appendix A — Decision Of The United States Court Of Appeals For The Federal Circuit Dated And Decided June 12, 2000 ..... 1a

Appendix B — Memorandum And Opinion Of The United States District Court For The Southern District Of Texas, Houston Division Dated June 8, 1999 And Entered June 9, 1999 ..... 18a

Appendix C — Order Of The United States District Court For The Southern District Of Texas, Houston Division Dated June 18, 1999 And Entered June 21, 1999 ..... 27a

Appendix D — Memorandum And Opinion And Final Judgment Of The United States District Court For The Southern District Of Texas, Houston Division Dated March 16, 1999 And Entered March 17, 1999 ..... 28a

Appendix E — Order Of The United States Court Of Appeals For The Federal Circuit Denying Petition For Rehearing Dated And Filed July 7, 2000 ..... 78a

Appendix F — Relevant Statutes 79a

Appendix G — United States Patent No. 5,353,393 ..... 85a

American Imaging Services, Inc. petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit in this case.

OPINIONS BELOW

The opinions of the United States Court of Appeals for the Federal Circuit on Appeal and on Petition for Rehearing are not reported. (Pet. App. A and E). The opinions of the United States District Court for the Southern District of Texas, Houston Division are included for reference (Pet. App. B and D).

STATEMENT OF JURISDICTION

The jurisdiction of this Court is invoked pursuant to 28 U.S.C § 1254(l). The ruling of the United States Court of Appeals for the Federal Circuit was issued on June 12, 2000. The United States Court of Appeals for the Federal Circuit's ruling on Petitioner's Petition for Rehearing was entered on July 7, 2000.

CONSTITUTIONAL PROVISION INVOLVED

The Fifth Amendment to the Constitution of the United States provides as follows:

> No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offense to be twice put in jeopardy

of life or limb, nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty or property, without due process of law; nor shall private property be taken for public use without just compensation.

STATUTORY PROVISIONS INVOLVED

35 U.S.C. § 102

35 U.S.C. § 103

(The relevant portions of these statutes are set forth in Appendix F.)

STATEMENT OF THE CASE

A. Course Of Proceedings

This case involves the spontaneous determination by the Court of Appeals of a summary judgment issue based upon a new claim construction while reviewing a summary judgment granted in a patent infringement cause of action. The ruling of the Federal Circuit Court of Appeals in the context of its review of the summary judgment was at odds with the holdings of this Court, the Federal Circuit's own previous rulings and the procedures set forth for appellate review of summary judgments.

This case was originally instituted in the District Court upon the jurisdictional basis of 28 U.S.C. §§ 1331, 1338 and 1367 asserting a federal question under United States Patent Law. On June 12, 2000, the United States Court of Appeals for the Federal Circuit affirmed in part, reversed in part, vacated in part and remanded portions of the summary judgment of the United States District Court for the Southern District of Texas.

The decision of the Court of Appeals included its resolution of a claim construction issue *sua sponte* and which it then applied to resolve a critical issue in this litigation that was not the basis of the trial court's summary judgment decision and which was without (i) argument or resolution in the district court (ii) argument by either party or (iii) appeal or cross-appeal in the United States Court of Appeals. This decision effectively deprived Petitioner of the right to a full hearing of all issues decided and its fundamental rights of due process before the federal court system.

On July 7, 2000, the United States Court of Appeals for the Federal Circuit overruled Petitioner's Petition for Rehearing (Pet. App. E, without Opinion).

B. Statement Of Facts

The matter now brought before this Court arises out of Cause No. H-97-134, Styled *American Imaging Services, Inc. v. Intergraph, Corp.*, filed in the United States District Court for the Southern District of Texas, Houston Division.

This patent infringement litigation was instituted by Petitioner, American Imaging Services, Inc. ("AISI" or "Petitioner") challenging certain software packages produced by the Respondent Intergraph Corporation ("Intergraph" or "Respondent"). Petitioner alleged that the software packages infringed upon Petitioner's United States Patent No. 5,353,393 (the "393 Patent") (Lodging Appendix). Respondent argued that the '393 Patent was invalid, in part, because it was anticipated by certain prior art known as the SuperPaint and the FORM:DRAFT software programs both of which had been copyrighted in the mid-1980's.

The Intergraph software packages that were challenged by AISI are computer graphics editing programs which are used by Computer Aided Design Systems ("CAD" systems). The '393 Patent by AISI is entitled the "Apparatus and method for manipulating scanned documents in a Computer Aided Design System". Application for the '393 Patent was filed in June of 1989.

The '393 Patent is a program whereby design images are converted from hardcopy to computer image by being "scanned" which converts the hardcopy (the usual representation) into electronic data. Once the conversion has taken place, the data is then stored in the computer's memory as a "bit map". This stored image is also referred to as a "rastor" image, and the data file known as a "rastor" file.

Intergraph responded to the patent infringement allegations lodged by AISI by alleging similarity in use, integration and storage. This analysis was denied by AISI.

C. Claim Construction

The district court held a hearing pursuant to the format established by the Federal Circuit and this Court in the case of *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996) (the "Markman hearing"), in order to conduct a construction analysis of the claims made the basis of infringement issues set forth in the district court litigation. Then, based upon the parties and the trial court's shared understanding of the trial court's *Markman* claim construction focus of inquiry — that the claims included either a narrow definition of CAD or a broad definition of CAD, both parties submitted extensive summary judgment evidence and created a substantial

summary judgment record. (Memorandum and Opinion of the United States District Court for the Southern District of Texas, Houston Division — Pet. App. D.) Thereafter, the trial court entered its Memorandum and Opinion and Final Judgment on March 17, 1999 in which it determined that AISI's '393 Patent was invalid because "all claims of the '393 Patent were anticipated and rendered obvious by the computer software SuperPaint". (Final Judgment of the United States District Court for the Southern District of Texas, Houston Division — Pet. App. D).

Following a Motion for New Trial, AISI appealed the Final Judgment of the District Court on July 7, 1999.

While AISI acknowledges that the Circuit Court of Appeals may conduct a *de novo* consideration of claims construction issues under Markman, AISI urges that the power of the Court of Appeals is not limitless. Rather, the *de novo* consideration from the trial court's grant of summary judgment must be conducted within the record and issues developed by the parties in order to be consistent with the principles articulated by this Court, the Federal Rules of Civil Procedure and the requirements of due process to the parties.

REASONS FOR GRANTING THE WRIT

Petitioner respectfully requests that the Supreme Court of the United States grant it and parties to patent litigation the same rights of due process which are provided to litigants who are involved in summary judgment proceedings and appeals of other complaints and matters. This Court and all circuit courts have recognized that summary judgments are not to be based upon matters not urged by the parties or not

addressed by the trial court. To craft an exception for patent appellants would result in the usurpation of the trial court's responsibility and destruction of litigant's ability to develop issues and counter issues and create a record for consideration.

I. THE ACTIONS OF THE COURT OF APPEALS IN DECIDING THIS SUMMARY JUDGMENT APPEAL HAS SO FAR DEPARTED FROM THE ACCEPTED MANNER OF SUCH PROCEEDINGS AS TO CALL FOR THIS COURT'S SUPERVISING POWER.

General standards that the appellate court applies in reviewing the grant or denial of a summary judgment motion is that a summary judgment is proper when it appears that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law. As Wright & Miller[1] point out and this Court has emphasized, the reviewing court's evaluation of a summary judgment should view the evidence and all references which are to be drawn from the underlying facts contained in the summary judgment record in the light most favorable to the non-movant. *United States v. Diebold, Inc.*, 369 U.S. 654, 655 (1962); *Poller v. Columbia Broadcasting System, Inc.*, 368 U.S. 464, 473 (1962).

It is well settled that the appellate court reviewing a summary judgment may not decide disputed issues of material fact. *Kennedy v. Silas Mason Co.*, 334 U.S. 249 (1948). As this Court pointed out in *Fountain v. Filson*, 336 U.S. 681 (1949), it is also reversible error for a Court of Appeals to order a summary judgment on a basis neither

1. Wright, Miller & Kane Federal Practice and Procedure: Civil 3d § 2716

urged nor considered by the trial court because such would, in essence, deprive the non-moving party of the opportunity to dispute the facts that were pertinent to the new claim.

In this case the parties and the trial court all operated under the same understanding of the trial court's claim construction, reached through the Markman hearing, that claims 1-7 and 14-29 raised by AISI *did incorporate the meaning of "CAD System"*. Based upon that claim construction understanding, the parties and the trial court addressed Respondents summary judgment issues. Because of the parties' shared understanding with the trial court that the threshold claim construction relating to claims 1-7 and 14-29, included either a narrow definition of CAD (AISI's proposed construction) or a broad definition of CAD (Intergraph's proposed construction), Petitioner was deprived of its opportunity to address and develop the factual record pertinent to the factual issues necessarily relating to the Court of Appeals' subsequent claim construction that claims 1-7 and 14-29 did *not* incorporate the meaning "CAD system".

Thus, contrary to the understanding of the parties and the district court, the Court of Appeals, *sua sponte*, construed claims 1-7 and 14-29 as not incorporating the meaning of "CAD system." Using this new claim construction as its analytical fulcrum, the Court of Appeals then (again *sua sponte*) reviewed the summary judgment factual issue of anticipation and the factual underpinnings of obviousness.

The focus of the *Markman* hearing before the district court was the definition of CAD. AISI argued that its narrow definition of CAD eliminated SuperPaint as prior art. A0014. Intergraph argued that its broad definition of CAD

encompassed SuperPaint and that the patent was invalid over such prior art. *Id.* The implied understanding in each of the foregoing arguments was that the CAD definition/limitation applied to the relevant claims. The foregoing understanding was ratified by Judge Rosenthal, who considered the definition of "CAD" and "CAD command" as used in the '393 patent to be a "threshold dispositive issue." A0013. Significantly, the district court granted *summary judgment* based upon its claim construction using Intergraph's definition of CAD.

At no time did Respondent argue to the district court, or to the Court of Appeals, that even accepting AISI's narrow definition of CAD, Intergraph should prevail, because a proper construction of Claims 1-7 and 14-29 would find CAD was *not* a limitation. Likewise, because it was not the subject of summary judgment consideration, AISI was not given the opportunity to fully develop a record concerning the functionality and attributes of SuperPaint nor to argue how those factors demonstrate lack of anticipation and non-obviousness on grounds other than the CAD limitation. Finally, the district court did not rule that the '393 patent was invalid irrespective of the definition of CAD because the CAD limitation was not incorporated in the relevant claims of the patent. The parties and the district court agreed that the relevant claims incorporated the CAD limitation. Importantly, in the district court, the only claim construction issue raised, and the only claim construction issue decided, was the meaning of CAD.

Because the focus of the *Markman* hearing was limited by the trial court to the threshold "CAD definition" claim construction issue, neither party, particularly Petitioner, had a meaningful opportunity to present evidence and arguments

concerning the functionality and attributes of SuperPaint on grounds other than "CAD" and how those factors demonstrate lack of anticipation and non-obviousness under the Court of Appeal's new interpretation.

Petitioner therefore, seeks correction of the erroneous *sua sponte* resolution of a the summary judgment issues by the United States Court of Appeals for the Federal Circuit that were not argued by Petitioner or Respondent to the district court, were not decided by the district court, were not raised by Respondent in a cross-appeal, and were not argued by either party on appeal. *See El Paso Natural Gas Co. v. Neztsosie*, 526 U.S. 473, 479-80 (1999) (institutional issues of fair notice and repose provide that Court of Appeals may not *sua sponte* consider new or unappealed issue). Petitioner respectfully requests that this Court grant writ of certiorari to reverse the Court of Appeals' ruling that claims 1-7 and 14-29 were anticipated as a matter of law because they did not incorporate "CAD system" into the claim language and remand to the district court for further proceedings.

II. THE DETERMINATION OF AN UNRAISED SUMMARY JUDGMENT ISSUE IS CONTRARY TO THIS COURT'S AND FEDERAL CIRCUITS' OWN HOLDINGS.

Contrary to the decision in this case, the Federal Circuit Court of Appeals only recently stated "[t]his rule insures that 'parties may have the opportunity to offer all of the evidence they believe relevant to the issues . . . [and] in order that litigants may not be surprised on appeal by final decision there of issues upon which they have had no opportunity to introduce evidence.' " *Boggs v. West*, 188 F.3d 1335, 1338 (Fed. Cir. 1999) (quoting *Hormel v. Helvering*, 312 U.S. 552, 556 (1941)).

This Court has stated the same proposition more clearly and strongly, holding that for a court to reach an issue not raised by Appellant, it must be brought before the court by the Appellee, *not* raised *sua sponte*. *Neztsosie*, 526 U.S. at 479-80. Petitioner respectfully suggests that the Court of Appeals' decision, to *sua sponte* perform claim construction after it overturned the basis for the district court's opinion, was improper under *Neztsosie* and contrary to its own practices. *See Envirco Corp. v. Clestra Cleanroom, Inc.*, 209 F.3d 1360, 1366 (Fed. Cir. 2000) (reversal of district court's claim construction required remand for proceedings on factual infringement issue); *Pitney Bowes v. Hewlett-Packard Company*, 182 F.3d 1298, 1314 (Fed. Cir. 1999); *see also, Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 93 F.3d 1572, 1583 (Fed. Cir. 1996) (case remanded when record did not reveal whether doctrine of equivalents was argued to or addressed by trial court).

Petitioner seeks writ of certiorari in order to urge this Court to require the Federal Circuit Court to conform its ruling in this case to its previously announced holdings and the holding in *Neztsosie*, and hold that if the Court of Appeals overturns the basis of a district court's claim construction decision on *summary judgment* [2], the case be remanded to the district court even if it relates to *Markman* hearing claims construction. While it is axiomatic that a prevailing party may argue affirmance of a judgment on any basis in the record, the Court of Appeals itself, in a different case, has stated that "[w]here the grounds urged in support of the judgment have not been presented to and passed upon by

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2. The procedure used by the Court of Appeals, in this case, blurs two very different standards of review presented by a *Markman* hearing appeal and a summary judgment appeal.

the trial court, we prefer not to address them in the first instance." *Fireman's Fund Insurance v. U.S.*, 909 F.2d 495, 499 (Fed. Cir. 1990).

III. THE MANNER OF TREATMENT OF THIS SUMMARY JUDGMENT IS SUCH A DEPARTURE FROM TRADITIONAL PRINCIPALS GOVERNING APPELLATE DETERMINATION AS TO REQUIRE SETTLEMENT BY THIS COURT.

The public policy effect of the Federal Circuit Court of Appeals procedure is far reaching in this very important area inasmuch as it will have the undesirable effect of encouraging the district courts to limit their *Markman* inquiries to a single issue and simply let the Court of Appeals perform the claim construction on appeal with respect to any and all other issues. Notwithstanding that district courts may occasionally be uncomfortable with applying the nuances of an area of law in which they may feel is specialized, Petitioner respectfully suggests that such lack of comfort does not justify the emasculation of the trial courts' role as set forth in *Markman*.

The process of initially addressing and narrowing the issues in a case and certainly can not be a rational for obviating the summary judgment respondent's due process rights. Not only is such a role inconsistent with Fed. R. Civ. Proc. 56 but it would decrease judicial economy in both the Court of Appeals and the trial court, and injures the institutional interests in fair notice as well as injuring the parties' due process rights.

IV. THE COURT OF APPEALS HAS DECIDED THIS APPEAL FROM SUMMARY JUDGMENT IN A WAY THAT DIRECTLY CONFLICTS WITH RELEVANT DECISIONS OF THIS COURT.

Because the issue was a new claim construction issue that was not argued or decided below, was not raised by Respondent in a cross-appeal and was not argued by either party in the appeal, the Court of Appeals erred in resolving it. *See El Paso Natural Gas Co. v. Neztsosie*, 526 U.S. 473 (1999) (institutional interests of fair notice and repose provide that court of appeals may not *sua sponte* resolve a new or unappealed issue on appeal); *see also Seal-Flex, Inc. v. Athletic Track & Court Construction*, 172 F.3d 836, 842 (Fed. Cir. 1999) (court properly declined to consider claim construction when issue not raised by the parties on appeal).

This Court's holding in *Neztsosie* correctly limits the Court of Appeals *de novo* consideration of matters not the subject of the appeal or cross-appeal. In *Neztsosie*, El Paso filed suit in the district court seeking to enjoin Neztsosie from pursuing nuclear-related injury claims in the Navajo Tribal Court. 526 U.S. at 478. The district court denied preliminary injunctions except to the extent Neztsosie sought relief under the Price-Anderson Act. *Id.* The district court also ruled that it should defer to the Tribal Courts to determine in the first instance whether Neztsosie's claims fell within the Act. *Id.*

El Paso appealed to the Ninth Circuit, but Neztsosie did not cross-appeal as to the partial injunction issued. *Id.* The Ninth Circuit affirmed, but then went on to consider the partial injunction, citing important comity considerations,

and reversed it. *Id.* at 478-79. This Court vacated and remanded, holding that the Ninth Circuit erred in *sua sponte* addressing an issue not raised or argued on appeal. *Id.* at 479. This Court held that the "comity considerations" did not defeat the institutional interests in fair notice and repose that the rule against resolution of new issues on appeal. *Id.* at 480. This Court then noted that the rule is "meant to protect institutional interests in the orderly functioning of the judicial system, by putting opposing parties and appellate courts on notice of the issues to be litigated." *Id.* at 481-82.

Here, the parties did not have notice of the issue to be litigated and subsequently made the subject of the Court of Appeals *de novo* claim construction. The lack of notice violates Petitioner's due process rights. Treatment of the issue for the first time on appeal prevented Petitioner from presenting evidence and arguments to the district court that might have demonstrated a genuine issue of material fact as to the functionality and attributes of SuperPaint apart from the definition of CAD, or that might have established that SuperPaint lacked other functions or attributes of the patent. Significantly, the Court of Appeals' statement that: "we conclude that the district court did not err in determining that there was no genuine issue of material fact and SuperPaint anticipates claims 1 through 7 and claims 14 through 29 of the '393 patent as a matter of law," (Pet. App. A at p. 10) ignores the fact that a record was not developed on this issue and unfairly prevents Petitioner from demonstrating the validity of the patent. The Court of Appeals' treatment of the unaddressed summary judgment issue also prevented Petitioner from directing the Court of Appeals to the relevant portions of the existing record that would demonstrate that the CAD limitation is incorporated

in the relevant claims and that SuperPaint does not have the same functionality and attributes, apart from CAD, as the patent.

Having identified a new, potentially dispositive, claim construction issue, the Court of Appeals should properly have remanded the case to the district court with instructions to consider the issue. Under *Neztsosie*, the Court of Appeals erred in actually resolving such a new dispositive issue.

CONCLUSION

For the reasons stated herein, the Petition for Writ of Certiorari should be granted.

Respectfully submitted,

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Dated: October 5, 2000

APPENDIX

APPENDIX A — DECISION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DATED AND DECIDED JUNE 12, 2000

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

99-1485

AMERICAN IMAGING SERVICES, INC.,

Plaintiff-Appellant,

v.

INTERGRAPH CORP.,

Defendant-Appellee.

DECIDED: June 12, 2000

Before LOURIE, GAJARSA, and LINN, *Circuit Judges*.

GAJARSA, *Circuit Judge*.

DECISION

The Plaintiff-Appellant, American Imaging Services, Inc. ("American Imaging") appeals the decision of the United States District Court for the Southern District of Texas granting the motion of Defendant-Appellee, Intergraph Corp. ("Intergraph"), for summary judgment. *See American Imaging Serv., Inc. v. Intergraph Corp.*, No. H-97-1394 (S.D. Tex. Mar. 17, 1999). The district court declared claims 1

through 11, 13 through 34, and 37 through 41 of American Imaging's U.S. Patent No. 5,353,393 (" '393 patent") invalid based upon 35 U.S.C. § 102(a) (1994) and claims 12, 35, 36 and 42 of the '393 patent invalid based upon 35 U.S.C. § 103 (1994). For the reasons set forth in this opinion, we *affirm-in-part*, *reverse-in-part*, *vacate-in-part*, and remand for further proceedings.

BACKGROUND

American Imaging is the holder of the '393 patent that generally relates to an apparatus and method for manipulating scanned documents using computer-aided design ("CAD") commands. The '393 patent addresses the need for converting a paper document into computer-readable electronic form, permitting changes to that document using computer tools and producing an edited version of that document in both hard copy and electronic form. American Imaging filed suit for patent infringement against Intergraph in the United States District Court for the Southern District of Texas. On May 26, 1998, Intergraph filed a motion for summary judgment asserting that the '393 patent was anticipated and obvious, and therefore, invalid.

The district court conducted a *Markman* hearing to derive a proper construction of the 42 patent claims. In particular, the court focused on the proper meaning of "CAD system" as used in the '393 patent. After reviewing the patent claims, specification and prosecution history, as well as entertaining testimony and evidence presented by both parties, the district court found that the intrinsic evidence broadly defined CAD systems as packages "commonly used to create and edit

drawings and other graphic displays on a computer screen or other cathode ray tube (CRT) display." *American Imaging*, slip. op. at 27 (quoting the '393 Patent, Col. 1, II. 18-21).

After adopting this broad definition of CAD, the district court found that SuperPaint, a computer graphics program compatible only with an Apple Macintosh, was a CAD system because it had the ability to create and edit drawings and other graphic displays on a computer screen. Once the district court determined that SuperPaint was a CAD system, it went on to examine the other features of SuperPaint. Relying on the undisputed testimony of William Snider, the designer of SuperPaint, the district court concluded that SuperPaint enabled its user to: (1) scan an image to create a raster file; (2) call up the raster image on the computer screen; (3) make modifications in the raster image using vector commands; and (4) merge the raster image and the vector changes to that image to produce an edited raster image which can be viewed on the screen, saved electronically and printed out. *See id.* at 33. Therefore, the district court concluded that SuperPaint anticipated claims 1 through 11, 13 through 34 and 37 through 41 of the '393 patent.

The district court further concluded that dependent claims 12, 35, 36, and 42 were obvious in light of SuperPaint. Although these four claims require an "operating system having an interrupt vector table," a feature foreign to Macintosh but present in conventional DOS operating systems, the district court found that these claims did not embody any additional patentable elements from the independent claims that they depended from and that any reasonably competent software programmer could write an

appropriate program addressing the requirements of the different operating system. The district court therefore concluded that these claims were obvious under 35 U.S.C. § 103. This appeal followed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1) (1994).

DISCUSSION

A. Standard of Review

This court reviews a district court's grant of a motion for summary judgment *de novo*. *See Monarch Knitting Mach. Corp. v. Sulzer Morat GMBH*, 139 F.3d 877, 880, 45 USPQ2d 1977, 1980 (Fed. Cir. 1998). Summary judgment is appropriate when there is no genuine issue of material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c). The moving party bears the burden of establishing the absence of any genuine issue of material fact, and all reasonable inferences must be resolved in favor of the non-movant. *See Anderson v. Liberty Lobby*, 477 U.S. 242, 255 (1986). A court must "view the evidence presented through the prism of the substantive evidentiary burden" that would operate at trial. *Id.* at 254. The underlying determination of invalidity must be predicated upon clear and convincing evidence. *See National Presto Indus. v. West Bend Co.*, 76 F.3d 1184, 1189, 37 USPQ2d 1685, 1687 (Fed. Cir. 1996).

B. Claim Construction

The first step in any invalidity analysis is claim construction. *See Rockwell Int'l Corp. v. United States*,

147 F.3d 1358, 1362, 47 USPQ2d 1027, 1029 (Fed. Cir. 1998). Claim construction is an issue of law, which this court reviews *de novo* without deference to the trial court. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979, 34 USPQ2d 1321, 1329 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370, 38 USPQ2d 1461 (1996). Interpreting the asserted claim begins with a review of the intrinsic evidence — the claims, the specification, and the prosecution history. *See id.*; *see also Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582, 39 USPQ2d 1573, 1576 (Fed. Cir. 1996). If the intrinsic evidence resolves any ambiguity in a disputed claim, extrinsic evidence cannot be used to contradict the established meaning of the claim language. *See Mantech Envtl. Servs., Inc. v. Hudson Envtl. Serv., Inc.*, 152 F.3d 1368, 1373, 47 USPQ2d 1732, 1736 (Fed. Cir. 1998). Extrinsic evidence may, however, be accepted by the court to enhance its understanding of the technology. *See EMI Group N. Am., Inc. v. Intel Corp.*, 157 F.3d 887, 892, 48 USPQ2d 1181, 1184 (Fed. Cir. 1998).

A review of the intrinsic evidence begins with the claims themselves. *See Vitronics*, 90 F.3d at 1581, 39 USPQ2d at 1576. The claims are to be construed in light of the specification and "both are to be read with a view to ascertaining the invention." *Bell Communication Research v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1819 (Fed. Cir. 1995); *see also Vitronics*, 90 F.3d at 1582, 39 USPQ2d at 1577 (stating that the specification is reviewed to determine whether the patentee used terms inconsistent with their ordinary meaning). Finally, the court should consider the prosecution history for any express representations regarding the scope and meaning of

the claims. *See Vitronics*, 90 F.3d at 1582, 39 USPQ2d at 1577.

The claim terms are generally given their ordinary and customary meaning. *See id.* Accordingly, a technical term used in a patent is interpreted as having the meaning a person "experienced in the field of the invention" would understand it to mean. *Hoechst Celanese Corp. v. BP Chem, Ltd.*, 78 F.3d 1575, 1578, 38 USPQ2d 1126, 1129 (Fed. Cir. 1996). *See also Johnson Worldwide Assoc., Inc. v. Zebco Corp.*, 175 F.3d 985, 989, 50 USPQ2d 1607, 1610 (Fed. Cir. 1999) (noting the "heavy presumption" that courts "give full effect to the ordinary and accustomed meaning of claim terms."). Of course, a patentee is free to act as his or her own lexicographer and may define a claim term differently from its ordinary meaning. *See id.* However, if the patentee chooses to act as his or her own lexicographer, this special definition must be "clearly stated within the patent specification or file history." *Vitronics*, 90 F.3d at 1582, 39 USPQ2d at 1576.

There is no indication in the written description or in the prosecution history that the patentee intended "CAD system" and "CAD commands" to be defined differently from their ordinary or customary meanings. Therefore, this court's task is to determine the ordinary meaning of "CAD system" and "CAD command" to one experienced in the field of the invention. *See Hoechst Celanese Corp.*, 78 F.3d at 1578, 38 USPQ2d at 1129.

In the written description, the patentee describes a CAD system as a package "commonly used to create and edit

drawings and other graphic displays on a computer screen or other cathode ray tube (CRT) display." '393 Patent, Col. 1, II. 17-21. The district court relied heavily on this sentence as the proper understanding of CAD system to one of skill in the art. However, in the very next sentence of the written description, the patentee further describes CAD systems as "particularly well-suited for producing engineering design drawings." '393 Patent, Col. 1, II. 21-22. The district court disregarded how this sentence further refines and narrows the broad description found in the previous sentence. As a result, the district court adopted an unduly broad definition of "CAD system."

The proper understanding of "CAD system" is ascertained by reading these two sentences in conjunction. For something to be a CAD system as understood by one of skill in the art, and as used in this patent, the system must not only be used to create and edit drawings on a computer screen, but must also be well-suited for producing engineering drawings. Thus, a "CAD system" is a species of graphics programs particularly well-suited for producing engineering drawings. "CAD commands," consequently, are those commands that enable a user to produce engineering drawings in a CAD environment.

The remainder of the written description supports this interpretation of "CAD system" and "CAD commands." For example, a user of a CAD system "can construct *detailed design drawings* and edit the drawings as necessary directly on screen." '393 Patent, Col. 4, II. 38-40 (emphasis added). Similarly, "CAD commands are used to produce a design drawing or the like on a computer screen display."

'393 Patent, Col. 4, ll. 15-17. Also, by using the technical term "CAD system" throughout the written description, the patentee is, of course, referring to the system described earlier in the patent — a system well-suited for producing engineering drawings. *See* col. 1, ll. 18-22. The fact that the specification does not repeatedly refer to engineering drawings or use particularly elaborate examples to illustrate the functionality of the invention does not suggest that the inventor intended to give "CAD system" a meaning broader than the ordinary and customary meaning of the term. *See Vitronics*, 90 F.3d at 1582, 39 USPQ2d at 1577 (stating that a patentee must clearly indicate that a claim term is used in a manner other than its ordinary meaning). Such statements further defining or describing "CAD system" are unnecessary given the explicit description of the term elsewhere in the patent and would have been redundant. Finally, merely because a CAD system is capable of producing simple drawings such as circles, lines, and the example found in Figure 4 of the '393 patent does not suggest that any graphics editor that can create such simple drawings is a "CAD system." This logical fallacy urged upon us by appellee must be rejected.

The doctrine of claim differentiation also supports this interpretation of "CAD system" and "CAD commands." Under this doctrine, two patent claims are presumptively of a different scope. *See Krafts Foods, Inc. v. Int'l Trading Co.*, 203 F.3d 1362, 1366, 53 USPQ2d 1814, 1823 (Fed. Cir. 2000). This presumption is heightened if the absence of such a difference in meaning and scope would make a term in a claim superfluous. *See Tandon Corp. v. United States Int'l Trade Comm'n*, 831 F.2d 1017, 1023, 4 USPQ2d 1283, 1288

(Fed. Cir. 1987). For example, claim 8, depending from claim 1, restricts the "second means for electronically displaying in response to user input commands" of claim 1 to a CAD system. '393 Patent, Col. 10, II. 60-62. Claim 8 also limits "merging means for merging said first and second images" of claim 1 to "editing means responsive to CAD user input commands of said second image for modifying said first image." '393 Patent, Col. 10, II. 60-62. To broadly define CAD system as simply a generic graphics editor, as the district court did, would render claim 8, as well as claims 9 through 13, which also incorporate the CAD limitation, superfluous in light of claims 1 through 7. Thus, the doctrine of claim differentiation supports the conclusion that "CAD system" refers to graphic editors particularly well-suited for engineering design drawings, and "CAD commands" are those commands used by such a system.

D. Anticipation

A patent claim is anticipated if a single prior art reference contains each and every limitation of the claimed invention. *See Rockwell Int'l Corp.*, 147 F.3d at 1363, 47 USPQ2d at 1031 (Fed. Cir. 1985); *see also* 35 U.S.C. § 102(a). Anticipation is a question of fact. *See In re Graves*, 69 F.3d 1147, 1151, 36 USPQ2d 1225, 1233 (Fed. Cir. 1998). The district court concluded that SuperPaint anticipated claims 1 through 11, 13 through 34, and 37 through 41 of the '393 patent. American Imaging's only contention opposing anticipation of these claims is that SuperPaint is not a CAD system, and therefore, cannot produce detailed engineering drawings. However, claims 1 through 7 and 14 through 29 are not limited to use in a CAD environment. Rather, these

claims are broad enough to encompass a general graphics program such as SuperPaint. Therefore, we conclude that the district court did not err in determining that there was no genuine issue of material fact and SuperPaint anticipates claims 1 through 7 and claims 14 through 29 of the '393 patent as a matter of law.

Claim 8, however, limits the electronic display means found in claim 1 to a CAD system. *See* '393 Patent, Col. 10, II. 60-65. Similarly, claims 9 through 11 contain these limitations through their dependency on claim 8. *See* '393 Patent, Col. 11, II. 1-21; '393 Patent, Col. 15-16, II. 9-45. In addition, claim 13 further limits "the manipulating means" in claim 1 to those responsive to CAD commands. A CAD system using CAD commands, as understood by one skilled in the art, is a graphics program that enables a user to produce engineering drawings. SuperPaint does not contain this limitation as found in these claims. SuperPaint does not enable its user to utilize commands to edit or to manipulate engineering drawings because SuperPaint is incapable of producing such documents. Thus, the district court erred in determining that SuperPaint anticipates claims 8 through 11, and 13.

Furthermore, the preambles of claim 30 and claim 37 contain the limitation of a CAD system, which uses CAD commands to produce and display design drawings.[1] This

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1. The preambles for claims 30 and 37, respectively, read as follows:

> 30. Apparatus for manipulating a scanned document in a computer aided design system which uses

(Cont'd)

limitation is incorporated into claims 31 through 34, which depend from claim 30, and claims 38 through 41, which depend from claim 37. See '393 Patent, Col. 15, II. 9-40; '393 Patent, Col. 16, II. 17-35. Although the preamble generally does not limit the scope of a claim, *see In re Paulsen*, 30 F.3d 1475, 1479, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994), in cases where the claim drafter purported to use both the preamble and the body of the claim to define the subject matter of the invention, the preamble is considered necessary to give life, meaning and vitality to the claims. *See Bell Communications*, 55 F.3d at 620-21, 34 USPQ2d at 1820; *see also Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 480-81 (CCPA 1951). Here, the specification clearly indicates that the patentee had invented an apparatus and method for manipulating and editing scanned design drawings in a CAD environment. We conclude the preambles of claims 30 and 37 do not merely state a purpose or intended use of the claimed apparatus; rather the preambles breathe life and meaning into the claims and further limits the claimed invention. Accordingly, because SuperPaint is not a CAD system, the district court erred in determining that it anticipates claims 30 through 34 and claims 37 through 41.

(Cont'd)

> computer aided design user input commands for producing a design drawing on a computer screen display . . . .
>
> 37. In a computer aided design (CAD) system utilizing computer aided design user input commands to produce and modify a vector-based image . . . .

Appendix A

E. Obviousness

A claimed invention is unpatentable if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103. Whether an invention is obvious is a legal conclusion based upon underlying factual inquires. *See Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 48 USPQ2d 459, 467 (1966). The factual inquiries include: (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective indicia of non-obviousness. *See id.*

Whether the teachings of the prior art suggest or motivate one of ordinary skill in the art to combine known references is a critical element in the obviousness inquiry. *See, e.g., Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 140, 231 USPQ 644, 647 (Fed. Cir. 1986) (holding that obviousness cannot be established by combining the teachings of the prior art without a suggestion to combine the references). This evidence may be derived from the prior art teachings, the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. *See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996). This showing must be unequivocal, and cannot rest on broad conclusory statements about what the prior art suggests to one of ordinary skill in the art. *See In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ2d 1614, 1616 (Fed. Cir. 1999). Otherwise, the obviousness determination is vulnerable to the improper use of hindsight.

Appendix A

Although SuperPaint does not anticipate claims 8 through 11, 13, 30 through 34 and 37 through 41 because it is a paint program rather than a CAD system, the question remains as to whether one of ordinary skill in the art would find it obvious to use the teachings of SuperPaint and apply them to a CAD system using CAD commands as found in these claims. There is no requirement that the prior art contain an expressed suggestion or motivation to combine known elements to achieve the claimed invention. *See Motorola*, 121 F.3d at 1472, 43 USPQ2d at 1489. As stated above, the suggestion or motivation to combine may be derived either from the knowledge of one skilled in the art or may come from the nature of the problem to be solved. *See Pro-Mold & Tool Co.*, 75 F.3d at 1572, 37 USPQ2d at 1630.

The '393 patent sought to solve the problem of manipulating scanned documents using CAD commands and facilitating the editing of a document and its reproduction in hard copy form. *See* '393 Patent, Col. 2, II. 1-17. Although SuperPaint does not operate to produce engineering drawings, it teaches the art of scanning an image to create a raster file, modifying the raster image using vector commands and merging and editing the raster image and the vector changes in a paint program that can be reproduced into hard copy form. More pointedly, SuperPaint teaches, in a general graphics program, to one of ordinary skill in the art of computer programming, the solution sought by the '393 patent. It would have been well within the knowledge of one of ordinary skill in the art to apply these teachings within a CAD system, which itself is a species of graphic programs. Therefore, we conclude that claims 8 through 11, 13, 30 through 34 and 37 through 41 would have been

obvious as a matter of law in light of SuperPaint and the knowledge generally available to one of ordinary skill in the art attempting to solve the problem these claims sought to address.

The district court determined that claims 12, 35, 36, and 42 were invalid for obviousness. In doing so, the court rejected American Imaging's argument that these claims add a further limitation to the '393 patent by describing a system for manipulating interrupt vector tables and ultimately determined that interrupt vector tables are merely an adaptation for operating within a conventional DOS system and were well-known within the art. Following this premise, the district court announced in conclusory terms that it would have been obvious to one of ordinary skill in the art to adapt SuperPaint with different data-bases, capabilities and applications to operate on a conventional DOS operating system. However, absent a teaching, suggestion or motivation that one of ordinary skill in the art would reconfigure SuperPaint for use in an operating system having an interrupt vector table, this conclusion of obviousness is erroneous.

Furthermore, the record lacks any other evidence regarding whether SuperPaint, which admittedly does not include the ability to operate with an interrupt vector table, suggests to one of ordinary skill in the art to reconfigure SuperPaint to enable it to work with an operating system having an interrupt vector table. Although an expressed suggestion to configure SuperPaint to work with such an operating system is not required, there must be some suggestion found in the field of knowledge generally

available to one of ordinary skill in the art or motivation to combine from the problem itself. *See In re Nilsson*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1501 (Fed. Cir. 1988); *see also Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1472, 43 USPQ2d 1481, 1489 (Fed. Cir. 1997). Mr. Snider's declaration, quoted by the district court in support of its obviousness determination is merely a conclusory statement that one *could* write a program to address these matters. His declaration, especially because he was not versed in DOS operating systems, is insufficient to support a conclusion of obviousness.

Moreover, SuperPaint only teaches the art of converting a document into computer-readable form wherein the user can modify the document and reproduce it in a hard-copy form. SuperPaint does not teach one of ordinary skill in the art the ability to reconfigure the SuperPaint program to operate within a conventional DOS operating system and the problem these claims sought to resolve would not motivate an ordinarily skilled artisan to reconfigure a Macintosh-compatible paint program to manipulate an interrupt vector table. Because there are genuine issues of material fact that must be resolved in order to determine whether claims 12, 35, 36 and 42 would have been obvious, summary judgment on these claims was incorrect.

F. Expert Testimony

Finally, American Imaging asserts that the district court improperly considered extrinsic evidence regarding the definition of "CAD system" during the *Markman* hearing. In particular, American Imaging objects to the use of certain

statements made by Mr. Snider. However, the district court expressly stated in its decision, as well as during the *Markman* hearing, that it used Snider's testimony regarding the definition of "CAD system" only to educate itself on the technology. The district court has the discretion to consider factual or appropriate extrinsic evidence, such as expert testimony, for purposes of a tutorial or for background information in the technical area at issue. *See EMI Group*, 157 F.3d at 892, 48 USPQ2d at 1184. Therefore, there was no error in the use of Snider's testimony.

American Imaging also challenges Snider's qualification as an expert regarding interrupt vector tables. Specifically, American Imaging states that this area is beyond Snider's field of expertise. The admissibility of expert testimony is a matter left to the discretion of the trial court and will not be disturbed on appeal unless it is manifestly erroneous. *See Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999) (holding that a district court's decision to admit or exclude expert testimony is reviewed for abuse of discretion). The district court did not commit manifest error by considering the declaration of Snider, a certified computer-software programmer with many years of experience. Thus, the district court did not abuse its discretion in admitting this declaration.

CONCLUSION

We conclude that a CAD system, as understood by one experienced in the field, refers to a species of graphic editors particularly well-suited for producing engineering drawings, and CAD commands are those commands that enable a user to produce engineering drawings. Because claims 1 through 7

and claims 14 through 29 are not limited to CAD systems, we affirm the district court's conclusion of anticipation with regard to these claims. However, the district court erred in concluding claims 8 through 11, claims 30 through 34, and claims 37 through 41 are anticipated by SuperPaint. On the other hand, these claims would have been obvious as a matter of law in light of SuperPaint. In addition, we vacate the district court's conclusion of obviousness with regard to claims 12, 35, 36 and 42 of the '393 patent because there are genuine issues of material fact regarding the underlying factual bases of the obviousness determination. Finally, we affirm the district court's rulings regarding expert testimony. Therefore, we remand to the district court for a resolution consistent with this opinion.

APPENDIX B — MEMORANDUM AND OPINION OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF TEXAS, HOUSTON DIVISION DATED JUNE 8, 1999 AND ENTERED JUNE 9, 1999

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

CIVIL ACTION NO. H-97-1394

AMERICAN IMAGING SERVICES,

Plaintiff,

vs.

INTERGRAPH CORP.,

Defendant.

MEMORANDUM AND OPINION

On March 16, 1999, this court entered final judgment that American Imaging's U.S. Patent No. 5,353,393 (the " '393 patent"), issued October 4, 1994, entitled "Apparatus and Method for Manipulating Scanned Documents in a Computer Aided Design System," is invalid under 35 U.S.C. §§ 102 and 103, because all claims of the '393 patent were anticipated and rendered obvious by a computer software program, SuperPaint. Plaintiff, American Imaging Services, Inc., has moved under Rule 59 of the Federal Rules of Civil Procedure to alter or amend the judgment or for a new trial. (Docket Entry No. 47). American Imaging asserts that this court found that SuperPaint anticipated the '393 patent based

on an incorrect claim construction; this court incorrectly found anticipation as to the four dependent claims of the '393 patent; and this court was incorrect in deciding that Intergraph had met its burden of proving that the '393 patent was obvious. Defendant, Intergraph Corporation, has responded. (Docket Entry No. 48).

Based on the motion and response, the record, and the applicable law, this court DENIES American Imaging's motion, for the reasons stated below.

I. The Standard for a Motion to Alter or Amend Judgment

American Imaging classifies its motion as a motion for new trial or to alter or amend judgment, under Federal Rule of Civil Procedure 59(a). "As no trial was held in the district court, it cannot logically be called a motion for new trial." *St. Paul Mercury Ins. Co. v. Fair Grounds Corp.*, 123 F.3d 336, 339 (5th Cir. 1997). The motion is correctly entitled a Rule 59(e) motion to alter or amend judgment. *See Patin v. Allied Signal, Inc.*, 77 F.3d 782, 785 n.1 (5th Cir, 1986); *Lupo v. Wyeth-Ayerst Labs.*, 4 F. Supp. 2d 642, 643 (E.D. Tex. 1997) ("[T]en days after the entry of . . . judgment, [plaintiff] filed a Motion for New Trial . . . . In doing so, he essentially sought reconsideration of the summary judgment ruling on that cause of action pursuant to Federal Rule of Civil Procedure 59(e).").

Rule 59(e) provides that "[a]ny motion to alter or amend a judgment shall be filed no later than 10 days after entry of the judgment." FED. R. CIV. P. 59(c). "A motion to reconsider an order granting summary judgment is appropriate when the court is presented with newly-discovered evidence, when

the court committed clear error, when there is an intervening change in controlling law, or when other highly unusual circumstances exist." *Becerra v. Asher*, 921 F. Supp. 1538, 1548 (S.D. Tex. 1996) (citing *School Dist. No. 1J, Multnomah County, Ore. v. AcandS, Inc.*, 5 F.3d 1255, 1263 (9th Cir. 1993)).

This court entered judgment on March 12, 1999. American Imaging filed its motion to alter or amend judgment on March 30, 1999. The motion is untimely. Even assuming the motion was timely, this court provides an independent basis for denying American Imaging's motion below.

II. The Claim Construction Argument

American Imaging asserts that the claim interpretation this court adopted is incorrect. American Imaging asserts that this court should have adopted American Imaging's proposed claim construction because it was "fully supported by the specification and claims, as well as the testimony of inventors and an expert, Dr. Akin." (Docket Entry No. 48, p. 2). American Imaging asserts that this court's interpretation of the '393 patent as broadly defining a CAD system is "not warranted" and cites the following example: "Every *Indy* race car can be driven on the street, but that hardly makes every car on the street an *Indy* race car." (*Id.*, p. 3). American Imaging contends that "the features of scaleability and measurability are absolutely required in order for a graphics package to be used for engineering design" and that the claims of the '393 patent specifically provide for that limitation.

In the previous memorandum and opinion, this court considered the claims, the specifications, and the file history

in reaching the conclusion that the '393 patent does not narrowly define a CAD system. It is, of course, true that every *Indy* race car can be driven on the street, but not every car driven on the street is an *Indy* race car. However, the '393 patent did not define the invention — the car — to be limited to an *Indy* race car. "Nothing in the words of the claims [of the '393 patent] limits the application to a system capable of producing precise, accurate, engineering and architectural drawings by associating nongraphical and graphical data and by automatically dimensioning and measuring." (Docket Entry No. 45, p. 14). If American Imaging desired to limit the '393 patent to CAD systems possessing those capabilities, it could have specifically provided for that narrower definition in the patent and specification. *See Sextant Avionique, S.A. v. Analog Devices, Inc.*, 172 F.3d 817, 825 (Fed. Cir. 1999) ("While [the patent holder] was free to act as its own lexicographer and to define this term in a manner different from its plain meaning, . . . it has not done so here." (citations omitted)); *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998) ("Absent a special and particular definition created by the patent applicant, terms in a claim are to be given their ordinary and accustomed meaning.").

American Imaging's motion to alter or amend the judgment based on the claim construction is DENIED.[1]

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1. American Imaging asserts that this court's finding as to whether SuperPaint anticipates the '393 patent is erroneous for the same reasons. Because this court finds no error in the claim construction set out in the previous memorandum and opinion, this court DENIES American Imaging's motion to alter or amend the judgment as to anticipation.

Appendix B

III. The Dependent Claims

American Imaging asserts that SuperPaint does not anticipate the '393 patent because it does not disclose each and every element of the four dependent claims.

This court did not find the dependent claims of the '393 patent anticipated by SuperPaint merely because this court found the independent claims upon which the dependent claims rely were anticipated. This court independently evaluated every claim of the '393 patent as required by 35 U.S.C. § 282 ("Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though depended upon an invalid claim."); *see also Circle R, Inc. v. Smithco Mfg., Inc.*, 919 F. Supp. 1272, 1293 (N.D. Iowa 1996); *Endress & Hauser, Inc. v. Hawk Measurement Sys. Pty. Ltd.*, 892 F. Supp. 1107, 1117 (S.D. Ind. 1995).

This court found the independent claims invalid based on anticipation and obviousness. In an independent evaluation of the dependent claims, this court analyzed the additional limitations in these claims concerning the interrupt vectors. This court found that the four dependent claims did not improve on the prior art because they did not embody any additional patentable elements. American Imaging asserts that "[s]uch a point of novelty test is not appropriate for anticipation analyses," citing *Hartness International, Inc. v. Simplimatic Engineering Co.*, 819 F.2d 1100, 1108 (Fed. Cir. 1987) to support its assertion.

Appendix B

In *Hartness*, the district court had found that independent claim 1 was nonobvious, but that claim 3, which was dependent on claim 1, was invalid because the feature it added "lacked novelty over a prior art patent." *Id.* at 1107-08. The Federal Circuit stated that if claim 1 was not obvious, "dependent claim 3 was nonobvious (and novel) because it contained all the limitations of claim 1 plus a further limitation." *Id.* at 1108. Because the district court found that the prior art did not teach the limitation in the independent claim, it could not have taught the same limitation in the dependent claim. In this case, unlike *Hartness*, this court found the independent claims to be anticipated and obvious; those same limitations are also anticipated and obvious in the dependent claims.

American Imaging also cites *Kegel Co., Inc. v. AMF Bowling, Inc.*, 127 F.3d 1420, 1429 (Fed. Cir. 1997) for the proposition that "[a]nticipation . . . requires the presence in a single prior art disclosure of each and every element of a claimed invention." (Docket Entry No. 47, p. 5). Intergraph asserts that the facts of *Kegel* are distinguishable from the facts of this case. The *Kegel* court found that the prior art did not anticipate the challenged invention because the prior art did not contain a significant limitation that the patent at issue did contain:

> The specification states that in the maintenance assembly of claim 7, each solenoid, when activated, causes the wick to bend or flex in and out of contact with the transfer roller. This bending is achieved by the use of springs that "bias [the] wick assemblies." Thus, we interpret

> the "means for selectively and independently shifting each of said wicks" limitation as referring to "shiftable wick assemblies," which in turn refer to the combination of the solenoids, biasing springs, and the flexible wicks. . . . Without the combination of these elements, the hardware could not be controlled in order to "select" between the on and off positions of the wicks.
>
> In contrast to the "flexible wicks" of the claimed invention, the Battle Creek machine wicks are rigid. They are not the equivalent of "flexible wicks" because they change positions not by flexing, but rather by being dragged by a movable tank from one position to the other. Because we conclude that "means for selectively and independently shifting each of said wicks . . ." limitation necessitates the use of a "flexible wick" and because we conclude that the stiff wick/ moveable tank assembly of the prior art Battle Creek machine is not the equivalent of a "flexible wick" we hold that claim 7 is not anticipated by the Battle Creek machine.

Kegel, 127 F.3d at 1430. Intergraph asserts that in *Kegel*, the differences between the prior art and the patent at issue were so significant that the two inventions embodied different limitations. The court found that the prior art did not anticipate the patented invention because of these crucial differences.

In this case, this court found that the four claims involving interrupt vector tables asserted a limitation based

on elements specific to IBM's DOS operating system, but could easily be adapted for use on other systems. These claims were obvious. The interrupt vector tables were well known in the art before the '393 patent. The obviousness test is "not one which turns on whether an invention is equivalent to some element of the prior art but rather whether the difference between the prior art and the subject matter in question 'is a different [sic] sufficient to render the claimed subject matter unobvious to one skilled in the applicable art.' " *Dann v. Johnson*, 425 U.S. 219, 228 (1976) (quoting *In re Johnston*, 502 F.2d 765, 772 (C.C.P.A. 1974) (Markey, C.J., dissenting)). Bill Snider testified that "any reasonably competent software programmer can write a software program which addresses these issues in an appropriate manner for a given operating system and computer hardware." (Docket Entry No. 23, Declaration of Snider, ¶ 14). To those skilled in the art, adapting the interrupt vector tables from IBM's DOS for use on another system would have been obvious.

American Imaging's motion to alter or amend judgment as to the validity of dependent claims 12, 35, 36, and 42 is DENIED.

IV. Obviousness

American Imaging asserts that Intergraph did not meet its burden in proving that SuperPaint rendered the '393 patent obvious. American Imaging asserts that Intergraph's evidence "stems from a single declaration of Mr. Snider." (Docket Entry No. 47, p. 6). American Imaging contrasts Intergraph's evidence with the evidence it presented from

Bennet and Akin, arguing that its experts were "more qualified."

In the previous memorandum and opinion, this court found that Intergraph had satisfied its burden of showing that the '393 patent was obvious. This court decided that issue of law based on the applicable factual determinations, including the scope and content of the prior art; the level of ordinary skill in the art; the differences between the claimed invention and the prior art; and the extent of the proffered objective indicia of nonobviousness. The different credentials of the witnesses does not make the conclusion erroneous.

American Imaging's motion to alter or amend judgment on the issue of obviousness is DENIED.

V. Conclusion

American Imaging's motion to alter or amend the judgment is DENIED.

SIGNED on June 8, 1999, at Houston, Texas.

s/ Lee H. Rosenthal
Lee H. Rosenthal
United States District Judge

APPENDIX C — ORDER OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF TEXAS, HOUSTON DIVISION DATED JUNE 18, 1999 AND ENTERED JUNE 21, 1999

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

CIVIL ACTION NO. H-97-1394

AMERICAN IMAGING SERVICES, INC.,

Plaintiff,

vs.

INTERGRAPH CORP.,

Defendant.

ORDER

American Imaging has asked this court to amend its Memorandum and Opinion of June 9, 1999, to reflect that judgment was entered against American Imaging on March 17, 1999, not March 12, 1999. This court amends the Memorandum and Opinion to reflect that judgment was in fact entered on March 17, 1999. American Imaging's motion to alter or amend judgment, filed on March 30, 1999, was timely.

SIGNED on June 18, 1999, at Houston, Texas.

s/ Lee H. Rosenthal
Lee H. Rosenthal
United States District Judge

APPENDIX D — MEMORANDUM AND OPINION AND FINAL JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF TEXAS, HOUSTON DIVISION DATED MARCH 16, 1999 AND ENTERED MARCH 17, 1999

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

CIVIL ACTION NO. H-97-1394

AMERICAN IMAGING SERVICES, INC.,

Plaintiff,

VS.

INTERGRAPH CORP.,

Defendant.

MEMORANDUM AND OPINION

In this patent infringement lawsuit, plaintiff, American Imaging Services, Inc. ("American Imaging"), challenges software packages produced by defendant Intergraph Corporation ("Intergraph"). American Imaging alleges that these software packages infringe American Imaging's United States Patent No. 5,353,393 (the " '393 patent"). Intergraph asserts that the '393 patent is invalid under 35 U.S.C. § 102(a), because it was anticipated by prior art, and under 35 U.S.C. § 103, because it was obvious in light of the prior art. Intergraph also asserts that the '393 patent is

unenforceable under the "on-sale bar" of 35 U.S.C. § 102(b). The prior art Intergraph asserts is the SuperPaint software program, copyrighted in 1986 and sold in early 1987, and the FORM:DRAFT software program, used beginning in 1985 and copyrighted in 1986.

The issues before this court are the construction of the claims of the '393 patent and Intergraph's motion for summary judgment on invalidity based on anticipation, obviousness, and the on-sale bar. This court held a hearing on claim construction under *Markman v. Westview Instruments, Inc.*, 116 S. Ct. 1384 (1996). Intergraph's arguments for claim construction are also the basis for Intergraph's motion and supplemental motion for summary judgment of invalidity, based on the prior art and the on-sale bar. (Docket Entry Nos. 20 and 36). Both parties have filed lengthy briefs and extensive summary judgment evidence in support of their claim construction arguments and their positions on summary judgment.

This court first construes the claims of the '393 patent at issue. Based on this claim construction, the entire record before this court, and the applicable law, this court GRANTS Intergraph's motion for summary judgment. The reasons for these rulings are set out below.

I. Background

The software programs at issue in this case are computer graphics editing programs. The '393 patent, entitled "Apparatus and Method for Manipulating Scanned Documents in a Computer Aided Design System," was

disclosed in an application filed on June 14, 1989. Like the programs Intergraph asserts as prior art, the '393 patent addressed a problem presented by the increasing use of computers in design and drafting work. That problem is the need to integrate the new technology of computer-generated and computer-stored designs with existing "hard" or paper copies of design documents. If paper copies cannot be converted to a computer-readable electronic form, the documents cannot be changed or edited using computer technology. The problem is how to convert a paper document into computer-readable electronic form, to permit a user to change that document using computer tools, and to produce an edited version of that document in both hard copy and electronic form.

In 1987, William Opincar, the owner of American Imaging, hired William Bennett to write a software program to address this problem. Bennett wrote LunaLink and LunaEdit, which were intended for use as add-ons to existing computer-aided design (CAD) software programs. American Imaging sold these programs in the summer of 1988. However, the programs did not realize commercial success. Users encountered problems in using the software with existing programs. In addition, the Luna software only worked on one manufacturer's existing CAD software. In early 1989, American Imaging hired Wylie "Skip" McDonald, a computer software programer, to work on improving the Luna software and expanding its compatibility with other software. McDonald's work did not lead to any new program. The Luna software has not been marketed since 1989.

Appendix D

It is undisputed that the '393 patented software program, the SuperPaint program, and the FORM:DRAFT program, tackle the problem of converting a hard copy of a design document into a computer image by first having the document "scanned." The scanning process converts the document into electronic data, in the form of "bits" or "pixels." The scanner reads the document as hundreds of horizontal lines, each line consisting of hundreds of "pixels." As the scanner reads across the line, it records each pixel as white or black. The complete picture is then stored in the computer's electronic memory as a "bit map." That data file and resulting image are the "raster" image.

Raster images are not the most efficient or flexible means to store or use graphic and related information. Computer programs rely on vector technology to store graphic and other features. Unlike raster images, which store the information as bit maps, vector images are stored in mathematical form. Elements such as circles, squares, and arcs can be created using these mathematical formulas. Vector images require many fewer bits of computer memory to describe each element of the image. As a result, vector images require much less processing time when manipulating the image.

The '393 patent, SuperPaint, and FORM:DRAFT all seek to improve earlier approaches to converting a hard copy into an image that can be electronically manipulated efficiently and easily. One earlier approach, noted in the prior art description of the '393 patent, required manual copying of an image using a "graphics tablet," an input device that allows a user to pick points of an image and place them into a vector image on the computer. Once enough points were

placed on the computer, the user could connect the dots to create lines. This process was labor-intensive, time-consuming, and tedious. Another known method, also noted in the '393 patent, was to scan a hard copy to produce a raster image, then use a software program to convert the individual pixels of the raster image into individual vectors in a vector image. However, this process did not require a smaller number of bits; an image that would typically be described by only one mathematical formula in a vector image would instead be made up of a large number of tiny vectors, each corresponding to a pixel in the original raster image.

The object of the invention embodied in the '393 patent was to provide a computer program that facilitated the reproduction and editing of hard copy documents with a CAD system; improve the apparatus and method for manipulating scanned images using CAD commands; and allow the production of raster image output from CAD systems. (Docket Entry No. 25, Ex. A, '393 patent, Col. 2, ll. 1-17).

It is undisputed that both a program created under the '393 patent and the SuperPaint program permit the user to scan a hard document to create a raster image; call up that raster image on the computer screen; modify the raster image using vector commands; merge the raster image and the vector changes to the raster image to produce an edited raster image; display the edited raster image on the computer screen; save and store the edited raster image electronically; and print the edited raster image out in a hard copy. (Docket Entry No. 21, pp. 7-8; Docket Entry No. 25, Ex. C, Deposition of Bennett, pp. 168-69; Docket Entry No. 23,

Declaration of Snider, ¶¶ 12, 13). The parties appear to agree that the FORM:DRAFT program also allows the creation of a raster image and display of a vector-based image; the manipulation of the raster image with vector commands; and the creation, display on the computer screen, electronic storage, and printing of a hard copy of the edited raster image. American Imaging argues that SuperPaint is not prior art because it is not a CAD system using CAD commands, while the '393 patent is limited to CAD systems. American Imaging argues that FORM:DRAFT is not prior art because, while it is a CAD system using CAD commands, it does not merge the vector and raster images to create an edited raster image, but instead requires copying.

The threshold dispositive issue is the meaning of the terms "CAD" and "CAD command" as used in the '393 patent. Plaintiff American Imaging argues that "[w]hen the correct claim construction is applied, the SuperPaint reference cited by the Defendant as prior art does not invalidate the patent-in-suit under §§ 102 or 103." Docket Entry No. 31, p. vii). American Imaging argues that properly construed, the '393 patent claims the ability to integrate raster and vector-based images on a CAD system. American Imaging argues that SuperPaint does not anticipate or make the '393 patent obvious because SuperPaint is not a CAD program; it does not include features that allow the creation of accurate and sophisticated engineering and architectural designs necessary for a system to be a CAD system.

Intergraph responds that the '393 patent does not define a CAD system or CAD commands so narrowly. Intergraph argues that the '393 claims and specifications expressly adopt

broad definitions of a CAD system and CAD commands, definitions that encompass programs such as SuperPaint.

In its supplemental motion for summary judgment, Intergraph argues that even under American Imaging's narrow definition of CAD, the FORM:DRAFT program is clearly a CAD system that uses CAD commands. American Imaging agrees that FORM:DRAFT is a CAD system but disputes that FORM:DRAFT embodies every element of the claims of the '393 patent. (Docket Entry No. 40, p. 6).

On June 12, 1998, this court held a *Markman* hearing for the purpose of construing the claims of the '393 patent. Both sides have submitted briefs and proposed claim constructions. Both parties have submitted an extensive summary judgment record.

II. Claim Construction

A. The Legal Standards for Claim Construction

The first step in any invalidity analysis is claim construction, a matter of law. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995), *aff'd*, 116 S. Ct. 1384 (1996); *see also Laitram Corp. v. Morehouse Indus., Inc.*, 143 F.3d 1456, 1461 (Fed. Cir. 1998); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc). In construing a claim, a court principally consults the evidence intrinsic to the patent, including the claims, the written description, and any relevant prosecution history. *See Bell & Howell Document Management Prods. Co. v. Altek Sys.*, 132 F.3d 701, 705 (Fed. Cir. 1997);

Appendix D

Vitrionics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582-83 (Fed. Cir. 1996).

A court first looks to the words of the claim themselves — both asserted and unasserted — to define the scope of the patented invention. *Vitrionics*, 90 F.3d at 1582-83. Although words in a claim are generally given their ordinary and customary meaning, a patentee may use terms in a manner other than their ordinary meaning as long as the special definition of the term is clearly stated in the patent specification or file history. *Id.*; *see also York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568 (Fed. Cir. 1996); *Hoechst Celanese Corp. v. BP Chems. Ltd.*, 78 F.3d 1575, 1578 (Fed. Cir. 1996) ("A technical term used in a patent document is interpreted as having the meaning that it would be given by persons experienced in the field of the invention, unless it is apparent from the patent and the prosecution history that the inventor used the term with a different meaning." (citations omitted)).

The second step for a court is to review the specification to determine whether the inventor has used any terms in a manner inconsistent with their ordinary meaning. *See Vitrionics*, 90 F.3d at 1582. The specification contains a written description of the invention, which must be clear and complete enough to enable those of ordinary skill in the art to make and use it. *Vitrionics*, 90 F.3d at 1582. The specification is always highly relevant to the claim construction analysis. *Id.* The specification acts as a dictionary if it expressly defines terms used in the claims or it defines terms by implication. *Markman*, 52 F.3d at 979. Claims must be read in light of the specification of which

they are a part. *Id.* However, "claims are not to be interpreted by adding limitations appearing only in the specification. . . . [P]articular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments." *Electro Med. Sys., S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 1054 (Fed. Cir. 1994); *see also Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 93 F.3d 1572 (Fed. Cir. 1996).

A court may also consider the prosecution history of the patent. *Markman*, 52 F.3d at 980. The prosecution history contains the inventor's express representations regarding the scope of the claims. *Vitrionics*, 90 F.3d at 1582-83. Such representations can limit the scope of the claims. *Id.* "Prosecution history 'limits the interpretation of claim terms so as to exclude any interpretation that was disclaimed during prosecution.' " *CVI/BETA Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1155 (Fed. Cir. 1997) (quoting *Southwall Techs. Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1576 (Fed. Cir. 1995)).

If, upon examination of the intrinsic evidence, the meaning of the claim language is sufficiently clear, resort to extrinsic evidence, such as treatises, technical references, and expert testimony, should not be necessary. *Spectrum Intern., Inc. v. Sterilite Corp.*, 1998 WL 854715, at * 4 (Fed. Cir. Dec. 9, 1998) (quoting *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1347 (Fed. Cir. 1998)); *Alpine Lace Brands, Inc. v. Kraft Foods, Inc.*, 1998 WL 738600, at *4 (Fed. Cir. Oct. 22, 1998). "The claims are the focus of the construction inquiry and extrinsic evidence 'may not be used to vary or contradict the claim language.' " *Alpine Lace Brands, Inc.*, 1998 WL 738600, at *4 (quoting *Mantech*

Envtl. Servs., Inc. v. Hudson Envtl. Servs., Inc., 152 F.3d 1368, 1373 (Fed. Cir. 1998)). "[E]xtrinsic evidence including expert testimony is not to be relied upon for purposes of claim interpretation, other than to aid the judge in understanding the technology; such evidence is only 'an aid to the court in coming to a correct conclusion as to the true meaning of the language employed in the patent.' " *EMI Group N. Am., Inc. v. Intel Corp.*, 157 F.3d 887, 892 (Fed. Cir. 1998) (quoting *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998)); *see also Mantech*, 152 F.3d 1373 ("Although this information always may be admitted by the trial court to educate itself about the patent and the relevant technology, the claim and the written description remain the primary and more authoritative sources of claim construction."). If the patent documents are unambiguous, expert testimony regarding the meaning of a claim is entitled to no weight. *Vitrionics*, 90 F.3d at 1584; *Southwall*, 54 F.3d at 1578. Although technically extrinsic evidence, a court is free to consult technical treatises or dictionaries at any time in order better to understand the underlying technology and to determine the meaning of claim terms. *See Vitrionics*, 90 F.3d at 1584 n.6; *see also Cybor*, 138 F.3d at 1459. However, a court may not use sources such as dictionary definitions to contradict a definition found in the intrinsic evidence. *See Vitrionics*, 90 F.3d at 1584 n.6.

B. Construction of the Claims of the '393 Patent

1. The Issue in Dispute

"[W]hat [the parties can] agree on [i]s that the main thing [they] differ on is what is a vector-based image, what is a

CAD system, and what are CAD commands." (*Markman* Hearing, Statement of Donoughue, p. 8). American Imaging defines a CAD system as a system that uses vector-based images, not merely vectors, and CAD commands, to produce accurate, sophisticated drawings and blueprints suitable for application in engineering and architecture. American Imaging asserts that to be a CAD system, a system must have the ability to associate nongraphical data — such as the designation of a building material and its manufacturer, cost, weight, and other specifications — with graphical data; the ability to measure and automatically dimension items on a screen; and the ability automatically to connect items on the screen. (Docket Entry No. 31, p. vi). American Imaging agrees that the '393 patent is a computer graphics editing program, but asserts that while all CAD programs are computer graphics editing programs, not all computer graphics editing programs are CAD programs.

Intergraph asserts that those skilled in the art do not distinguish between a vector image and a vector-based image. Intergraph argues that the plain meaning of the term "computer-aided design" and the broad definition the '393 patent gives the terms CAD and CAD command defeat American Imaging's belated attempt to narrow the definition to a system that incorporates specific features necessary to produce sophisticated, accurate, engineering and architectural plans. Intergraph describes the differences between a CAD system such as SuperPaint, and CAD systems that are accurate and detailed enough to be used to create architectural and engineering plans, as one "in degree, not of kind. It's just a more sophisticated system." (*Markman* Hearing, Statement of Furniss, p. 109).

Appendix D

This court must first decide whether American Imaging's proffered definition of a "CAD" system is supported by the language of the claims, the specifications, and the prosecution history.

2. The Claims and Specifications in the '393 Patent

The '393 patent has six independent claims (Claims 1, 14, 20, 26, 30, and 37) and thirty-six dependent claims. Claim 1 of the '393 patent states:

> In an electronic data processing system, apparatus for manipulating a scanned document, comprising, in combination:
>
> first means for electronically displaying a first image representing the scanned document, said first image being a raster image comprised of a plurality of discrete picture elements defining at least one graphic element having a first shape;
>
> second means for electronically displaying in response to user input commands, simultaneously with the display of said raster first image, a second image, said second image being a vector-based image comprised of a plurality of vectors having respective defined starting and ending points having predetermined positions relative to said picture elements of said raster first image and representing user-generated alterations to the first shape of said at least one graphic element; and

> merging means for merging said first and second images to provide an edited raster image wherein said at least one graphic element has a second shape differing from said first shape in accordance with at least one of said plurality of vectors displayed responsive to the user input commands.

(Docket Entry No. 25, Ex. A, Col. 9-10, ll. 55-68, 1-10). Claim 8 limits Claim 1 by defining the second means from Claim 1 as comprising a computer-aided design system. (Col. 10, ll. 60-63). Claim 13 also references computer-aided design. It states, "further including manipulating means responsive to user input CAD commands for simultaneously manipulating a hybrid image including both said first, raster, image and said second, vector-based, image." (Col. 11, ll. 22-26).

A court must first examine the words chosen for the patent claims and specifications, giving those words the plain meaning used by those skilled in the art, unless the patent itself specifies another meaning. *York Prods.*, 99 F.3d at 1568; *Vitrionics*, 90 F.3d at 1582-83; *Hoechst Celanese Corp.*, 78 F.3d at 1578. Nothing in the words of the claims of the '393 patent limits the invention to the production of precise, accurate, engineering and architectural drawings. Nothing in the words of the claims limits the application to a system capable of producing precise, accurate, engineering and architectural drawings by associating nongraphical and graphical data and by automatically dimensioning and measuring. To the contrary, the '393 patent claims broadly describe the types of documents, designs, and drawings that can be produced by the invention.

Appendix D

The broad definition of a CAD system and CAD commands in the claims of the '393 patent is consistent with the definition expressly set out in other parts of that patent. The '393 patent begins by describing the patented invention in relationship to a CAD system:

FIELD OF THE INVENTION

> This invention relates to computer aided design systems and in particular to an apparatus and method for manipulating scanned documents in an existing computer aided design system.

(Docket Entry No. 25, Ex. A, '393 Patent, Col. 1, ll. 10-15).

The patent then gives a explicit definition of a CAD system in terms of its functions and capabilities:

BACKGROUND OF THE INVENTION

> Computer aided design (CAD) packages are commonly used to create and edit drawings and other graphic displays on a computer screen or other cathode ray tube (CRT) display. CAD systems are particularly well-suited for producing engineering design drawings by allowing the user to enter a series of commands to produce certain standard elements of the drawing, such as circles, squares and lines, at selected locations on screen to effect a particular design. A locator device such as a pointer, cursor, "mouse" or cross-hair, is used to select the position on the screen at which a

> particular element is to be drawn. Changes to the drawing can be made directly on screen. The display scale can be changed to zoom in on selected portions of the drawing.

(*Id.*, Col. 1, ll. 16-31).

This functional definition of a CAD system is a broad definition, generally encompassing the creation and editing of "drawings and other graphic displays on a computer screen." Nothing in this express functional definition states that a CAD system is limited to a system that includes the functions of associating nongraphical data, such as materials and material composition and vendors, with the graphical items shown on the screen, or the functions of automatically dimensioning and measuring.

The definition also describes CAD commands broadly, as commands that "produce certain standard elements of the drawing, such as circles, squares and lines, at selected locations on screen." Nothing in this definition limits CAD commands to commands that use vector language to add nongraphical data to an engineering drawing.

The specifications for the '393 patent continue this broad definition of CAD systems and CAD commands. The specifications state that a conventional computer-aided design system "receives user input . . . and translates the inputs into selected commands to control a software-implemented display driver 14, which in turn controls a hardware display device 16. The CAD commands are used to produce a design drawing or the like on a computer screen

display." (Docket Entry No. 25, Ex. A, '393 Patent, Col. 4, ll. 10-17). The functional description continues by giving an example:

> the user can control CAD system 10 to produce a circle, square, line or other standard drawing feature, at a particular position on the display by positioning the locator device at the selected position on the display and entering the appropriate command. CAD system 10 will respond to the user input by controlling display driver 14 and display device 16 to produce the selected drawing feature at the selected location on the screen display.

(Docket Entry No. 25, Ex. A, '393 Patent, Col. 4, ll. 21-29). The patent informs the reader that "the system and method according to the present invention allow an operator to manipulate raster-based, scanned documents using standard computer aided design commands, which substantially reduces the time and expense associated with the production of design drawings and other graphic displays, both on screen and in hard copy form." (Docket Entry No. 25, Ex. A, '393 Patent, Col. 9, ll. 40-46).

Each description is broad, not limited to systems or commands with the functions necessary to produce precise, accurate, engineering plans and architectural blueprints.

As support for its argument that a CAD system must include the functions of associating nongraphical and graphical data and automatic dimensioning and measuring,

Appendix D

American Imaging cites language in the specification stating that "CAD systems are particularly well-suited for producing engineering design drawings by allowing the user to enter a series of commands to produce certain standard elements of the drawing, such as circles, squares and lines, at selected locations on the screen to effect a particular design." (Docket Entry No. 25, p. 11; Ex. A, '393 Patent, Col. 1, ll, 21-26). From this statement, American Imaging argues that "a CAD system must be capable of producing engineering drawings and the like." (Docket Entry No. 25, p. 11). The clear language of the claims and specifications is inconsistent with this argument. The description of a CAD system and CAD commands in the claims includes, but is not limited to, a system and commands that can produce precise, accurate, engineering drawings. Even the reference to engineering design drawings emphasizes the use of vector commands to produce circles, squares and lines. Such tasks need not include the ability to associate nongraphical data with graphical drawings on the screen or to perform automatic dimensioning or measuring functions. Paul Bennett, a co-inventor of the '393 patent, confirmed this interpretation in his deposition. When asked if CAD systems are "never used for anything but engineering and technical drawings," Bennett answered, "I wouldn't go as far as to say that, but that is their primary purpose in life." Bennett also admitted that "CAD Systems are often used for designs that do not require mathematical certainty." (Docket Entry No. 25, Ex. C, Deposition of Bennett, p. 105).

A careful review of the specification and prosecution history shows that American Imaging neither explicitly nor implicitly defines the term "CAD" more narrowly than the

broad functional definition provided in the '393 patent. The '393 patent states that CAD is used to "create and edit drawings *and other graphic displays* . . ." (Col. 1, ll. 18-21) (emphasis added). Nowhere in the claims or specifications does the patent mention the "intelligent" capabilities as functions necessary to make a system a CAD system: the capabilities of associating nongraphical data with the graphical drawings and the ability to dimension and measure automatically. To interpret the patent as American Imaging urges, this court would have to infer those limiting features from the use of the term "computer-aided design." The clear language of the claims and the specifications makes it clear that American Imaging defined that precise term broadly, not with the limitations it now asserts.

American Imaging also asserts that the use of the term "vector-based image" as opposed to "vector" in the '393 patent supports its narrower interpretation of a CAD system and CAD command. American Imaging contends that a vector image differs from a vector-based image: "a vector-based image as used in the patent is intended to mean something more than an image composed of mathematical vectors. . . . The vector-based image defined by the patent is much more [than a mathematical vector]." (Docket Entry No. 25, p. 11). Intergraph, on the other hand, does not distinguish between a vector-based image and a vector image. Intergraph describes vector language as an efficient method of storing graphical data in a computer's memory "whereby graphic features are electronically stored in mathematical form." (Docket Entry 21, p. 4).

Appendix D

The claim language of the '393 patent does not support American Imaging's argument. Claim one defines a vector-based image as "comprised of a plurality of vectors having respective defined starting and ending points." (Docket Entry No. 25, Ex. A, '393 Patent, Col. 9, ll. 67-68). The specification states that in the vector database, "design features are represented by a plurality of discrete vectors, selected ones of which have starting and ending point coordinates with reference to a predetermined origin. . . . Other ones of the vectors may represent a predetermined geometric shape, such as a circle, at a predetermined position relative to defined reference position." (Docket Entry No. 25, Ex. A, Col. 4, ll. 31-34, 35-37). The specification states that once the raster and vector images are overlayed, the user can do one of two things with the superimposed images on the computer screen. The user can make changes, using standard CAD commands, to the raster image. These changes are shown on top of the raster image on the screen, as a vector image. "What appears on the screen represents a composite image with both raster and vector elements shown. The vector elements represent the CAD generated changes." (Col. 5, ll. 33-35). The user may also "reproduce the raster image as a CAD image by simply tracing over the raster image using the proper sequence of CAD commands, thereby producing a vector-based image and eliminating the need for the raster image." (Col. 5, ll. 36-40).

The specification makes it clear that, as used in the '393 patent, a "vector-based" image is generally an image created by the mathematical language of vectors, implemented through CAD commands. The use of the term "vector-based" does not support American Imaging's attempt to narrow the meaning of a CAD system or a CAD command.

Appendix D

Figure 4, the only drawing of a figure in the '393 patent application, also supports a broad definition of a CAD system, and CAD command. As used in Figure 4, a CAD command uses a vector to increase the size and shape of the image displayed on the screen. This function is not inconsistent with the use of other functions, such as the ability to associate nongraphical data with graphical data, or to produce precise, accurate, engineering or architectural drawings. The function demonstrated in Figure 4 does not require the involvement or presence of those other features. Even without those other features, the commands that create Figure 4 are still CAD commands in a CAD system.

Bennett's deposition testimony is consistent with this conclusion. When asked if it is a CAD feature to be able to duplicate features, Bennett answered, "I think most CAD packages have something like that, yes." (Docket Entry No. 25, Ex. C, Deposition of Bennett, p. 129). Referring to Figure 4, Bennett testified that "computer-aided design commands," as used in the '393 patent, means "the commands in the CAD system that you use to make those modifications." (*Id.*, p. 222).

In his videotaped declaration, Bill Snider duplicated Figure 4. Once he scanned the picture into the raster layer of the computer, he "put the vector layer of SuperPaint on top of the raster layer and created the additional lines that you see added in figure 4-b and then separately in 4-c and also created other shapes to erase or cover over the parts of the 4-a drawing that no longer needed to show to create the 4-d picture." (*Markman* Hearing, Statement of Snider, p. 82). SuperPaint does not include the functions of associating

nongraphical data with graphical data and automatic dimensioning and measuring. However, SuperPaint duplicated Figure 4, which American Imaging claimed in the '393 patent to be the result of using CAD commands in a CAD system.

The prosecution history also supports Intergraph's position. The '393 patent issued after a lengthy prosecution at the PTO on October 4, 1994, with a priority date of June 14, 1989. The PTO Examiner rejected the first twenty-three claims. In the second round of amendments after the rejection, the inventors of the '393 patent stated that "[i]ndependent claims 1, 8, 14 and 20 are amended to more particularly define the invention as being utilized to manipulate scanned documents in a computer aided design system." (Docket Entry No. 40, Ex. 16, p. 6). The PTO then rejected the patent application as obvious. In the amended application, the inventors stated that "[i]ndependent claims 1, 8, 14, 20 and 27 are amended to more particularly define the invention as being utilized to manipulate scanned documents in a computer aided design system for changing the shape of geometric objects contained in a scanned, raster image using computer aided design input commands." (Docket Entry No. 40, Ex. 18, pp. 5-6). The inventors later stated that the alleged prior arts — U.S. Patent No. 4,905,185, issued to Sakai; and U.S. Patent No. 4,843,569, issued to Sawada — "clearly do not disclose or suggest the claimed invention for altering the shape of geometric objects by simultaneously displaying, with a scanned raster image, a vector-based image in registration with the raster image, in which the user defines the desired alterations on the display with input commands and then merges the images to produce

an edited raster image of the altered geometric shape." (*Id.*, pp. 6-7). The Examiner again rejected this argument, stating that "Suwada's [sic] *document D1* can be any well known form such as Japanese characters, notations or graphic objects." (Docket Entry No. 40, Ex. 19, p. 3). If American Imaging intended to define a CAD system narrowly, limited to a system that incorporates the ability to associate nongraphical data and automatically dimension and measure, American Imaging would have made this distinction in the patent prosecution to distinguish the '393 patent from the prior art.

In the final round of the prosecution of the '393 patent, while attempting to distinguish *HyperCard*, the applicants stated the following:

> As is known in the art, and as described in the sentence bridging pages 7-8 of applicants' specification, vector images are stored in a vector database which includes, for straight lines for example, selected terminal coordinates, line thickness, etc. For other shapes, a vector based CAD system also includes such "intelligent", *or mathematical, description of the image portions, thus enabling storage of elements representing circles by storage of information relating to the coordinate location of the center and the radius of the circle*, rather than requiring storage of an entire field of pixels with some pixels turned ON and others turned OFF. . . . Such an approach is clearly simpler than a requirement for modification of each individual pixel of a raster scanned image.

(Docket Entry No. 40, Ex. 27, pp. 2-3) (emphasis added). The "intelligent" capability that American Imaging claims to be the hallmark of computer-aided design is the ability efficiently to store the information necessary to present an image, such as a circle, as a mathematical description. The "intelligent" capability that is necessary for a computer-aided design system is not stated as including the ability to associate nongraphical with graphical data or the ability to dimension and measure automatically, as American Imaging argues to this court.

At the *Markman* bearing, this court heard testimony from John Edward Akin, Ph.D., in support of American Imaging's position, and from Bill Snider, who testified in favor of Intergraph. Dr. Akin is a professor of mechanical engineering at Rice University in Houston, Texas. He testified that those skilled in the art understand that a CAD system is different from a painting system. In order to be a CAD system, certain capabilities or functions that would enable the products to be used in engineering or architectural applications must be present: it "has to provide accurate descriptions, complete descriptions, as complete as possible; and it has to have the associated non-graphical data. That's a key item. If it doesn't have the associative non-graphical data and ways to manipulate those data, then it's not a CAD system. It might be a sketching system or low level drawing system, but it's not a CAD system." (*Markman* Hearing, Testimony of Dr. Akin, pp. 35-36). By contrast, Bill Snider, who developed the SuperPaint program, testified not as an expert in engineering, but as one knowledgeable about computer programming. Snider testified that a computer-aided design system is one that can "create and edit drawings and other

graphic displays on a computer screen or other cathode ray tube"; the user can "enter a series of commands to produce certain standard elements of the drawing such as circles, squares, and lines at selected locations on screen to effect a particular design." (*Markman* hearing, Testimony of Bill Snider, pp. 79-80).

This court finds the intrinsic evidence sufficiently clear to construe the '393 patent. The plain language used in the claim and the definitions provided in the specification make it clear that the definition of computer-aided design means the ability to create and edit drawings and other graphic displays on a computer screen. This court considers Dr. Akin's and Bill Snyder's testimony to provide background information relevant to the technology at issue. *See EMI Group N. Am., Inc. v. Intel Corp.*, 157 F.3d 887, 892 (Fed. Cir. 1998) ("[E]xtrinsic evidence including expert testimony is not to be relied upon for purposes of claim interpretation, other than to aid the judge in understanding the technology; such evidence is only 'an aid to the court in coming to a correct conclusion as to the true meaning of the language employed in the patent.' " (quoting *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1454 (Fed. Cir. 1998)); *see also Mantech*, 152 F.3d 1373 ("Although this information always may be admitted by the trial court to educate itself about the patent and the relevant technology, the claim and the written description remain the primary and more authoritative sources of claim construction.").

Akin and Snyder, both familiar with CAD programs, provided conflicting testimony as to the meaning of computer-aided design. Dr. Akin gave a clear definition of

computer-aided design in the context of sophisticated engineering applications. However, the '393 patent clearly defines CAD systems more broadly. Dr. Akin's testimony cannot be used as the basis for rewriting the functional definition of a CAD system set out in the '393 patent claims and specifications. *See Alpine Lace Brands, Inc.*, 1998 WL 738600, at *4 ("The claims are the focus of the construction inquiry and extrinsic evidence [such as expert testimony] 'may not be used to vary or contradict the claim language.' " (quoting *Mantech*, 152 F.3d at 1373)); *Bell & Howell*, 132 F.3d at 706 ("Once a dispute over claim construction arises, 'experts' should also not be heard to inject a new meaning into terms that is inconsistent with what the inventor set forth in his or her patent and communicated, first to the patent examiner and ultimately to the public.").

Intergraph points to the McGRAW-HILL DICTIONARY OF ELECTRONICS AND COMPUTER TECHNOLOGY 91 (1984), which defines computer-aided design in broad terms, not limited to the type of precise, accurate engineering or architectural applications that Dr. Akin used to describe the minimum functions of any CAD system. (*Markman* Hearing, Defendant's Ex. 1). *See Vitrionics*, 90 F.3d at 1584 n.6 ("Judges are free to consult [technical treaties and dictionaries] at any time in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent document). The dictionary definition of CAD as "[t]he generation of computer automated designs for display on cathode-ray tubes" is similar in its breadth to the definition American

Imaging used in its '393 patent: "Computer aided design (CAD) packages are commonly used to create and edit drawings and other graphic displays on a computer screen or other cathode ray tube (CRT) display." (Docket Entry No. 25, Ex. A, '393 Patent, Col. 1, ll. 18-21).

As defined in the patent, CAD "packages are commonly used to create and edit drawings and other graphic displays on a computer screen or other cathode ray tube (CRT) display." (Docket Entry No. 25, Ex. A, '393 Patent, Col. 1, ll. 18-21). If American Imaging had sought to limit the '393 patent to CAD systems that have the ability to associate nongraphical and graphical data and automatically to connect, measure, and dimension, capabilities necessary for architectural and engineering applications, it could have specifically provided for that narrower scope. *See Sextant Avionique, S.A. v. Analog Devices, Inc.*, No. 98-1063, 1999 WL 112040, at * (Fed. Cir. Feb. 26, 1999) ("While [the patent holder] was free to act as its own lexicographer and to define this term in a manner different from its plain meaning, . . . it has not done so here." (citations omitted)); *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1249 (Fed. Cir. 1998) ("Absent a special and particular definition created by the patent applicant, terms in a claim are to be given their ordinary and accustomed meaning.").[1]

American Imaging's argument fails. CAD, as defined in the '393 patent, is a broad term that refers to the ability

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1. American Imaging argues that Intergraph's own patents specifically define CAD consistent with American Imaging's narrow definition. The point is that Intergraph used express narrow definitions of CAD in some of its patents.

"to create and edit drawings and other graphic displays on a computer screen or other cathode ray tube (CRT) display." A CAD system, as used in the '393 patent, includes, but is not limited to, a system that has the capability of associating nongraphical with graphical data and performing functions such as automatically dimensioning and measuring, and producing precise, accurate, engineering drawings.

With this claim construction, this court now turns to the pending motions for summary judgment.

III. Intergraph's Motion for Summary Judgment

A. The Applicable Legal Standards

Summary judgment is appropriate if no genuine issue of material fact exists and the moving party is entitled to judgment as a matter of law. FED. R. CIV. P. 56. Under FED. R. CIV. P. 56(c), the moving party bears the initial burden of "informing the district court of the basis for its motion, and identifying those portions of [the record] which it believes demonstrate the absence of a genuine issue of material fact." *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986); *Norman v. Apache Corp.*, 19 F.3d 1017, 1023 (5th Cir. 1994). The party moving for summary judgment must demonstrate the absence of a genuine issue of material fact, but need not negate the elements of the nonmovant's case. *Little v. Liquid Air Corp.*, 37 F.3d 1069, 1075 (5th Cir. 1994) (en banc). If the moving party fails to meet its initial burden, the motion for summary judgment must be denied, regardless of the nonmovant's response. *Little*, 37 F.3d at 1075.

When the moving party has met its Rule 56(c) burden, the nonmovant cannot survive a motion for summary judgment by resting on the mere allegations of its pleadings. *McCallum Highlands, Ltd. v. Washington Capital Dus, Inc.*, 66 F.3d 89, 92 (5th Cir. 1995). The nonmovant must go beyond the pleadings and designate specific facts showing that there is a genuine issue for trial. *Little*, 37 F.3d at 1075 (citing *Celotex*, 477 U.S. at 325).

In deciding a summary judgment motion, "[t]he evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in his favor." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986). "Rule 56 '*mandates* the entry of summary judgment, after adequate time for discovery and upon motion, against a party who fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party will bear the burden of proof at trial." *Little*, 37 F.3d at 1075 (citing *Celotex*, 477 U.S. 322).

Patents are presumed valid. 35 U.S.C. § 282 (1988). In rendering a decision on a motion for summary judgment, a court must "view the evidence presented through the prism of the substantive evidentiary burden" that would inhere at trial. *Rockwell Int'l Corp. v. United States*, 147 F.3d 1358, 1362 (Fed. Cir. 1998) (quoting *Anderson*, 477 U.S. at 255). Therefore, a determination of invalidity on summary judgment must be predicated on facts established by clear and convincing evidence. *Id*; *see also Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 881 (Fed. Cir. 1998) ("[T]he movant's burden [is] to show invalidity of an issued patent by clear and convincing evidence.").

However, summary judgment is as appropriate in a patent case as in any other, if no genuine issue of material fact is present and the movant is entitled to judgment as a matter of law. *Southwall Techs., Inc. v. Cardinal IG Co.*, 54 F.3d 1570, 1575 (Fed. Cir. 1995). Claim interpretation, as a question of pure law, is amenable to summary judgment and disagreement over the meaning of a term within a claim does not necessarily create a genuine issue of material fact. *Id.*

To ascertain the scope of the relevant prior art, a court examines the field of the inventor's endeavor and the particular problem with which the inventor was involved. *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 881 (Fed. Cir. 1998). The prior art used in litigation must be at least as relevant as that examined by the PTO. *See Molins PLC v. Textron, Inc.*, 48 F.3d 1172,1180 (Fed. Cir. 1995) (citing *LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n*, 958 F.2d 1066, 1075-76 (Fed. Cir. 1992)). The production of evidence of prior art *not* considered by the Patent and Trademark Office may carry more weight in defeating a presumption of validity, because the district court is not called upon to disagree with the PTO or required to defer to it as to the effect of that evidence upon the validity of the patent. *American Hoist & Derrick Co. v. Sowa & Sons*, 725 F.2d 1350, 1369-70 (Fed. Cir. 1984).

B. Determination of Relevant Prior art

1. SuperPaint as the Prior Art

In 1985, Bill Snider, a software designer from San Diego, California, began to work on a new software program to be

used on an Apple Macintosh computer. (Docket Entry No. 21, p. 7; Docket Entry No. 23, ¶ 7). This new software program came to be known as SuperPaint 1.0 ("SuperPaint"). SuperPaint and the SuperPaint Manual were both copyrighted in 1986. (*Id.*). SuperPaint was sold commercially for the first time in either late 1986 or early 1987. During the period from 1987 to 1995, SuperPaint versions 1.0, 1.1, 2.0, 3.0, and 3.5 were produced and sold. SuperPaint won awards from MacWorld magazine.

SuperPaint was a combination of two Macintosh programs, MacPaint, which used a raster image, and MacDraw, which used a vector image. Snider labels it a "graphics editor." (*Markman* Hearing, Testimony of Snider, p. 79). SuperPaint combined these two programs to create a program that was capable of using vector commands to modify raster images. It had the ability to "create and edit drawings and other graphic displays on a computer screen or other cathode ray tube." (*Id.*). Snider admits that SuperPaint could not be used to design a building such as a sky scraper; it is not particularly well suited for producing engineering design drawings. (*Id.*, p. 80). However, it did enable the user to perform the following tasks:

1. Scanning an image to create a raster file;

2. Calling up the raster image on the computer screen;

3. Making modifications in the raster image using vector commands; and

> 4. "Merging" the raster image and the vector changes to that image to produce an "edited raster image" which can be viewed on the screen, saved electronically and printed out.

(Docket Entry No. 21, p. 7).

Intergraph asserts that the Examiner did not consider SuperPaint. Intergraph acknowledges that a reference to SuperPaint appears in THE COMPLETE HYPERCARD HANDBOOK, which the Examiner did consider. However, Intergraph states that "there is no description of its functions and nothing to inform the Examiner of its significance. There is no evidence that the Examiner considered SuperPaint in any way." (Docket Entry No. 21, p. 12, n.3).

The prosecution history shows that the Examiner used HyperCard as a reference against the invention. (Docket Entry No. 25, Ex. A, '393 Patent, "References Cited"). HyperCard is a computer program that allows a user to approximate a stack of conventional index cards with text, drawings, animations, and links between cards; in essence, an early version of the "hypertext" now common on the Worldwide Web. (Docket Entry No. 25, Ex. F). The program was not used primarily for creating drawings, but drawings could be incorporated into HyperCard. The HyperCard manual refers to SuperPaint twice. It states, "SuperPaint (Silicon Beach Software) combines both the paint and draw environments into one, each environment getting its own layer domain in a document." (Docket Entry No. 25, Ex. F, p. 195). As Intergraph states, "[t]here is nothing in this brief reference to alert the Examiner to the fact that SuperPaint

could perform the allegedly unique function claimed in the '393 application," the function of manipulating a scanned document in an electronic data processing system by displaying the raster image and the vector image; making changes in the vector image; then merging the raster and vector images to create an edited raster image that could be saved, displayed, and printed. (Docket Entry No. 32, p. 15).

SuperPaint is more relevant than the prior art used by the Examiner. There is no evidence that the Examiner considered it in the '393 patent prosecution.

2. FORM:DRAFT as the Prior Art

FORMTEK, Inc., formed in 1982, is a computer software company in California; it is now a subsidiary of Lockheed-Martin Corporation. FORM:DRAFT is a drafting program, "developed to provide a full complement of computer-aided drafting capabilities that are used in a familiar 'drafting board' environment." (Docket Entry No. 36, p. 4). FORM:DRAFT was used at Bell Pennsylvania as early as 1985. (Docket Entry No. 36, p. 3; Briggs Affidavit, ¶¶ 5-14, 16).

Robert F. Briggs is the main developer of FORM:DRAFT. He holds a degree in computer science and has worked as a software developer for over twenty years. Briggs describes FORM:DRAFT as a program that allows freehand drawing functions that can directly modify the image. In addition, "mechanical drafting functions were available to generate vector overlays, some or all of which could then be applied to the raster overlay." (Docket Entry No. 36, Ex. 2, ¶ 8).

Appendix D

> FORM:DRAFT provides for the definition of a drawing, called a sheet, made up of multiple vector overlays and a single raster image overlay. Once defined, all overlays are kept aligned and are saved and loaded and can be manipulated as a single entity.

(Docket Entry No. 36, Ex. 2, Affidavit of Briggs, ¶ 10). FORM:DRAFT allows the user to edit the drawing on the vector overlay, and either copy and paste, cut and paste, or erase from the source location. (*Id.*, ¶ 12).

American Imaging contends that the references cited by the Examiner are just as relevant as FORM:DRAFT. (Docket Entry No. 40, pp. 2-3). American Imaging points to two patents considered by the Examiner — U.S. Patent No. 4,905,185, issued to Sakai; and U.S. Patent No. 4,843,569, issued to Sawada. American Imaging contends that the '393 patent was originally rejected "because of the 'cut and paste' features, like those found in FORM:DRAFT, were found in a combination of the '185 and the '569." (Docket Entry No. 40, p. 4). The Examiner rejected the '393 patent based on these two patents for the first time on July 26, 1990. Beginning on January 25, 1991, the inventors submitted amendments to the claims. In the remarks submitted to the PTO Examiner, the inventors stated that "[n]either *Sakai* nor *Sawada, et al.*, nor the combination thereof, discloses or suggests an apparatus and method for manipulating a scanned document in an electronic data processing system." (Docket Entry No. 40, Ex. 9, p. 7). They further stated the following:

> Specifically the cited references do not show or suggest an apparatus or method in which a first

> image representing a scanned document is displayed as a raster image, a second image is displayed in response to user input commands as a vector-based image superimposed on the raster image, and the raster and vector-based images are *merged* to provide an edited raster image . . . . Nor do the cited references show or suggest the unique apparatus and method claimed by Applicants in Claims 7 and 13, respectively, whereby the raster image is edited by identifying a first set of picture elements in an "on" state which are overlaid on the display by corresponding vectors of the vector-based image having a color associated with an "off" state and for changing the first set of picture elements from the "on" state to the "off" state, and by identifying a second set of picture elements in the "off" state which are overlaid on the display by corresponding vectors of the vector-based image having a color associated with the "on" state and for changing the second set of picture elements from the "off" state to the "on" state.

(Docket Entry No. 40, Ex. 9, pp. 7-8) (emphasis added).

Later, the inventors stated, "[t]his unique feature of Applicant's invention, whereby the first and second image are merged to edit the first image is neither shown nor suggested in the cited references." (*Id.*, pp. 8-9). The inventors also stated that "[t]here is no teaching or suggestion in any of the prior art references as to how a raster image can be manipulated and edited using vector-based

commands." (*Id.*, p. 9). The Examiner rejected the claims again, for the same reasons.

In yet another round of amendments, the inventors pointed out the distinction between the two inventions: "Sawada *fails to change* the shape of any of the elements thereof. . . . [T]he reference merely teaches combining two sets of predefined vector data to produce a resultant set of vector data, without changing either of the data." (Docket Entry No. 40, Ex. 24, p. 21). The '393 patent, on the other hand, allows for modification of the shapes of graphic elements. The Examiner apparently accepted this distinction; Sawada and Sakai were not referenced again in the prosecution history.

FORM:DRAFT is capable of performing the cut-and-paste functions that Sawada and Sakai perform. However, the record before this court indicates that FORM:DRAFT cannot merge the edits from the vector overlay on the raster overlay. The prior art used in litigation must be at least as relevant as that examined by the PTO. *See Molins PLC v. Textron, Inc.*, 48 F.3d 1172, 1180 (Fed. Cir. 1995) (citing *LaBounty Mfg., Inc. v. United States Int'l Trade Comm'n*, 958 F.2d 1066, 1075-76 (Fed. Cir. 1992)). FORM:DRAFT is not more relevant than the prior art considered by the PTO Examiner. FORM:DRAFT does not appear to meet the criteria necessary to consider it as prior art for the '393 patent.

Appendix D

C. 35 U.S.C. § 102(a) — Anticipation

A product is not patentable unless it is new. 35 U.S.C. § 102(a) states:

> A person shall be entitled to a patent unless —
>
> (a) the invention was known or used by others in this county, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent.

35 U.S.C. § 102(a) (1984). Determining whether a product is new within the meaning of the patent statute requires comparing the product with products of the relevant prior art. *See Shatterproof Glass Corp. v. Libbey-Owens Ford Co.*, 758 F.2d 613, 619 (Fed. Cir. 1985). If a single piece of relevant prior art contains all the elements of the patent at issue, the prior art is said to have anticipated the patent. *See Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 715-16 (Fed. Cir. 1984). Anticipation is a question of fact. *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991).

American Imaging contends that SuperPaint does not anticipate the '393 patent because SuperPaint does not meet every element of the claims. Intergraph argues that SuperPaint covers each of the claims in the '393 patent, except for dependent claims 12, 35, 36, and 42. Intergraph argues that because these claims are dependent on invalid independent claims, and they do not embody some additional patentable elements, they do not save the '393 patent. (Docket Entry No. 21, p. 16).

Appendix D

Because this court finds that the '393 patent does not use computer-aided design and command defined narrowly, as American Imaging asserts, the argument that SuperPaint does not anticipate the '393 patent because it is not a CAD system fails. SuperPaint can accept a scanned image into its raster layer. (Docket Entry No. 23, Declaration of Snyder, ¶ 11). SuperPaint superimposes a raster layer and vector layer. (*Id.*, ¶ 8). It allows simultaneous viewing of both layers. SuperPaint "allow[s] editing in the vector layer to manipulate the image in the raster layer." (*Id.*, ¶ 13). SuperPaint can "merge" the "two layers — the original raster image in the raster layer and the modifications accomplished in the vector layer — to create a 'modified raster image' which could be saved and/or printed." (*Id.*, ¶ 12). SuperPaint allows the user to print the stored raster image on to paper. (*Id.*, ¶ 13). SuperPaint embodies all of the elements of each of the claims of the '393 patent, except for claims 12, 35, 36, and 42, which are dependent claims.

Dependent claims, unless argued separately, stand or fall with the independent claims upon which they rely. *See Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997). Dependent claims cannot stand alone in the patent process. *See Swift Agric. Chem. Corp. v. Farmland Indus., Inc.*, 674 F.2d 1351, 1358 (10th Cir. 1982). Dependent claims must add something new if the claims upon which they are dependent are anticipated.

Claim 12 states the following:

> Apparatus according to claim 8, wherein said electronic data processing system includes an

operating system having an interrupt vector table, further comprising:

driver identification means for identification of existence of a display driver interrupt address in the vector table,

relocation means for relocating a CAD generated display driver interrupt from said display driver interrupt address to a clear location, and

remapping means for remapping a link program means to said display driver interrupt address.[2]

Dependent claims 12, 35, 36, and 42, do not embody any additional patentable elements. The '393 patent, as embodied in these four claims, did not make any improvements on the prior art. SuperPaint anticipates the '393 patent.

According to American Imaging's claim interpretation, the system requires a "computer whose base system programming includes interrupt vector tables. . . . [The tables] tell the computer the location of programs which perform the basic functions of the computer, such as displaying items on the screen." (Docket Entry No. 25,

2. Claim 35 also deals with the interrupt vector table. Claims 36 and 42 add only the concept of the display driver as applied to the invention.

p. 15). American Imaging notes that the interrupt vector tables are a feature of IBM's DOS and cannot be found on Macintosh computers; SuperPaint does not use interrupt vector tables.

Intergraph asserts that interrupt vector tables were well known in the art before the '393 patent and therefore not unique or novel. Intergraph argues that the "specification of an apparatus having an interrupt vector table adds nothing to the functionality of the patented invention and would be within the capabilities of a reasonably competent programmer to adapt the claimed invention to such an apparatus." (Docket Entry No. 32, p. 20). Snider, who designed the SuperPaint program, stated that "[a]s in most modern computers, these details are handled automatically by the operating system. There is nothing unique or novel about these details. Any reasonably competent software programmer can write a software program which addresses these issues in an appropriate manner for a given operating system and computer hardware." (Docket Entry No. 23, Declaration of Snider, ¶ 14).

D. 35 U.S.C. § 103 — Obviousness

35 U.S.C. § 103 states the following:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been

> obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

35 U.S.C. § 103(a) (Supp. 1998).

Obviousness is an issue of law based on underlying determinations of fact. *See Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 881 (Fed. Cir. 1998). These underlying factual determinations include:

> 1) the scope and content of the prior art
>
> 2) the level of ordinary skill in the art
>
> 3) the differences between the claimed invention and the prior art; and
>
> 4) the extent of any proffered objective indicia of non-obviousness.

See id; *see also Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). "The inquiry is not whether there was a 'real discovery of merit' or whether the claimed invention offered a 'new solution,' but whether the claimed subject matter as a whole 'would have been obvious at the time the invention was made to a person having ordinary skill in the art.' " *Monarch*, 139 F.3d at 881 (quoting 35 U.S.C. § 103(a) (Supp. I 1995)). Obviousness " 'is distinct from novelty in the sense that an invention may be obvious even though it is not identically disclosed anywhere in the prior art.' " *Abbott Labs. v. Diamedix Corp.*, 969 F. Supp. 1064, 1071 (N.D. Ill. 1997)

(quoting 2 DONALD S. CHISUM, CHISUM ON PATENTS §5.01, at 5-10 to 5-11 (1994)). The obviousness test is "not one which turns on whether an invention is equivalent to some element of the prior art but rather whether the difference between the prior art and the subject matter in question 'is a different [sic] sufficient to render the claimed subject matter unobvious to one skilled in the applicable art.' " *Dann v. Johnston*, 425 U.S. 219, 228 (1976) (quoting *In re Johnston*, 502 F.2d 765, 772 (C.C.P.A. 1974) (Markey, C.J., dissenting)); *see also Smith v. ACME Gen. Corp.*, 614 F.2d 1086, 1093 (6th Cir. 1980) ("Prior art need not be exactly the same in order to be applicable; differences between the prior art and the invention are permitted. This is to say that the mere existence of differences between the prior art and an invention does not establish the invention's nonobviousness, particularly where, as here, the prior art and the invention are substantially similar." (citing *Dann*, 425 U.S. at 229-30)).

American Imaging maintains that SuperPaint differs from the '393 patent because SuperPaint is a graphics editor, not a CAD system, and the '393 patent adds a further limitation by describing a system for manipulating the interrupt vector tables. (Docket Entry No. 31, p. 13). This court has determined that SuperPaint is a computer-aided design system as the '393 patent defines the term, and that the interrupt vector tables are a simple adaptation to IBM software and not independently patentable. Intergraph also argues that "a software programmer of ordinary skill would naturally be able to take the SuperPaint program and 'invent' what is described in the '393 patent." (Docket Entry No. 21, p. 18). American Imaging responds that the "comparison is

not to be made between fields to apply the skills of one field to another field. . . . As is evident from the comparison of SuperPaint to the claims of the patent, SuperPaint was not within the field of the invention. It is not an indicator of the level of skill in the art of development of CAD packages or CAD package add-ons." (Docket Entry No. 31, p. 13).

In this case, the pertinent art is computer software programming; the level of ordinary skill is in designing computer programs. American Imaging's argument rests on the distinction between CAD systems and graphics editing programs, a distinction defeated by the '393 patent's broad definition of a CAD system.

The Federal Circuit has stated that the scope of the prior art is governed by two questions: "(1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent: to the particular problem with which the inventor is involved." *In re Clay*, 966 F.2d 656, 658 (Fed. Cir. 1992) (citations omitted). SuperPaint and the '393 patent are within the same field. Even if they were in different fields, SuperPaint addresses the same basic problem that the '393 inventors address. When SuperPaint was sold and copyrighted, computer programmers were aware of the need to scan hard copies into a computer and manipulate them on the computer. SuperPaint invented a more efficient method for manipulating the scanned image, by merging the vector and raster layers and permitting changes in the raster layer by manipulating the vector layer. Although SuperPaint does not incorporate associated nongraphical data, it was obvious

that the same objective could be achieved by adding programs with different data bases, capabilities, and applications. *See Dann v. Johnston*, 425 U.S. 219, 229-30 (1976) ("There may be differences between respondent's invention and the state of the prior art. . . . It may be that the ability is not possessed to the same extent either by existing machine systems in the [ ] industry or by the [patented] system. But the mere existence of differences between the prior art and an invention does not establish the invention's nonobviousness. The gap between the prior art and respondent's system is simply not so great as to render the system nonobvious to one reasonably skilled in the art."). American Imaging has not raised a genuine issue of material fact that the invention claimed in the '393 patent was not obvious.

American Imaging also argues that other indicia of nonobviousness, such as commercial success and "long felt but unsolved need," favor a finding for American Imaging. American Imaging argues that the '393 patent was a great commercial success at trade shows because it solved the problem of converting a paper drawing into a drawing that could be manipulated and stored in a CAD system. A consideration of these factors, American Imaging argues, shows that the '393 patent was not obvious.

American Imaging has not pointed to evidence showing commercial success of the '393 patent. American Imaging has provided only Bennett's deposition testimony that LunaLink and LunaEdit received attention at a trade show. This testimony does not raise a fact issue disputing obviousness, considering the teachings of the prior art.

See Miles Labs., Inc. v. Shandon Inc., 997 F.2d 870, 878 (Fed. Cir. 1993) ("Such evidence, if present, would weigh in favor of non-obviousness, although the lack of such evidence does not weigh in favor of obviousness." (citing *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955 (Fed. Cir. 1986))).

E. 35 U.S.C. § 102(b) — The On-Sale Bar

35 U.S.C. § 102(b) states the following:

> A person shall be entitled to a patent unless —
>
> . . . .
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the ate of the application for patent in the United States.

An invention that was on sale in the United States more than one year prior to the date of the patent application is not entitled to a patent. To invalidate a patent under § 102(b), the party asserting the on-sale bar must demonstrate by clear and convincing evidence "that there was a definite sale or offer to sell more than one year before the application for the subject patent, and that the subject matter of the sale or offer to sell fully anticipated the claimed invention or would have rendered the claimed invention obvious by its addition to the prior art." *Isogon Corp. v. Amdahl Corp.*, No. 97 CIV. 6219(SAS), 1998 WL 811849 at *1 (S.D.N.Y. Nov. 19, 1998)

(quoting *UMC Elec. Co. v. United States*, 816 F.2d 647, 656 (Fed. Cir. 1987)).

Before the Supreme Court's decision in *Pfaff v. Wells Electronics, Inc.*, 119 S. Ct. 304 (1998), a section 102(b) bar required a showing that the invention was "substantially complete" at the time of the offer for sale. *See Pfaff v. Wells Electronics, Inc.*, 124 F.3d 1429, 1434 (Fed. Cir. 1997). The test for deciding if an invention was substantially complete was whether, at the time of the offer, there was "reason to expect that [the invention] would work for its intended purpose upon completion." *Id.* (quoting *Micro Chem., Inc. v. Great Plains Chem. Co., Inc.*, 103 F.3d 1538, 1545 (Fed. Cir.), *cert. denied*, 117 S. Ct. 2516 (1997)).

The Supreme Court has recently held that the 'substantially complete' standard seriously undermines the "interest in providing inventors with a definite standard for determining when a patent application must be filed." *Pfaff*, 119 S. Ct. at 311. The Supreme Court replaced that standard with a two-part test for the application of the on-sale bar. *Id.* at 311-12. "First, the product must be the subject of a commercial offer for sale." *Id.* at 311. "Second, the invention must be *ready for patenting*." *Id.* at 312 (emphasis added). This second condition "may be satisfied in at least two ways: by proof of reduction to practice before the critical date; or by proof that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention." *Id.* "A process is reduced to practice when it is successfully performed. A machine is reduced to practice when it is assembled adjusted and used.

Appendix D

A manufacture is reduced to practice when it is completely manufactured. A composition of matter is reduced to practice when it is completely composed." *Id.* at 307 n.2 (quoting *Corona Cord Tire Co. v. Dovan Chem. Corp.*, 276 U.S. 358, 383 (1928)).

In this case, Intergraph has alleged that the '393 patent is invalid because the LunaLink and LunaEdit software was offered for sale by American Imaging at the A/E/C trade show in Chicago in May of 1988, and was actually sold on May 24, 1988, more than one year prior to the filing of the priority application on June 14, 1989. Intergraph also alleges that SuperPaint is prior art against the '393 patent.[3]

American Imaging disputes the on-sale bar allegation, arguing that even if such an offer was made, the invention was not substantially complete. American Imaging has not disputed that the invention was offered for sale and actually sold on May 24, 1988. Intergraph has presented the testimony of Mr. Bennett and Mr. Opincar, co-inventors of the '393 patent, and a sales order and invoice. (*Markman* Hearing, Ex. 14). Mr. Bennett testified that the invention was offered for sale in May 1988. Mr. Opincar testified that the invention was advertised and shown at a trade show in May of 1988. Finally, Intergraph has admitted into evidence an American Imaging sales order and invoice reflecting an order for the LunaLink and LunaEdit software on May 24, 1988.

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3. Because SuperPaint has already been found to anticipate or render obvious all of the claims in the '393 patent, only the Luna software will be considered in the on-sale bar context.

Appendix D

This court finds that Intergraph has shown by clear and convincing evidence that there was a definite commercial offer to sell the claimed invention on May 24, 1988. Intergraph has satisfied the first condition of the *Pfaff* test.

As to the second condition of the *Pfaff* test, an invention need not be substantially completed for the on-sale bar to apply. *Pfaff*, 119 S. Ct. at 311-12. The Federal Circuit has recognized that once the functions of a piece of software have been disclosed with particularity, one skilled in the art can generally practice the invention by writing the specific source code required. *See Robotic Vision Sys., Inc. v. View Eng'g., Inc.*, 112 F.3d 1163,1166 (Fed. Cir. 1997); *Fonar Corp. v. General Elec. Co.*, 107 F.3d 1543, 1549-50 (Fed. Cir. 1997); *In re Hayes Microcomputer Prods., Inc. Patent Litig.*, 982 F.2d 1527, 1537-38 (Fed. Cir. 1992). If before June 15, 1988, the LunaLink and LunaEdit software were described in sufficient detail for one skilled in the art to complete the specific source code required to enable the invention, the on-sale bar would apply to invalidate the '393 patent.

Bennett testified that: 1) the LunaLink software was completed on March 15, 1988, and was demonstrated in a working form at the A/E/C trade show in May of 1988; 2) attendees of the trade show in May of 1988 were told about the future availability of LunaEdit, and were also given brochures discussing LunaEdit; 3) he believed that he began work on LunaEdit after LunaLink was near completion; and 4) he estimated that completing LunaEdit took approximately six months. Mr. Opincar testified that LunaEdit was completed in late 1988 or early 1989.

Appendix D

Intergraph has presented evidence that LunaLink was described in sufficient detail to meet the "ready for patenting" condition on or before June 15, 1988. However, it has not met its burden of presenting the necessary evidence that LunaEdit was described sufficiently so that one skilled in the art could practice the invention.

This court finds disputed issues of material fact as to whether the claimed invention was described in sufficient detail on or before June 15, 1988 such that it was "ready for patenting" under the second condition of the *Pfaff* test. Accordingly, this court DENIES Intergraph's summary judgment motion on the applicability of the § 102(b) on-sale bar.

IV. Conclusion

This court GRANTS Intergraph's motion for summary judgment on anticipation and obviousness, but DENIES Intergraph's motion for summary judgment on the applicability of the § 102(b) on-sale bar. Because all claims of the '393 patent have been found invalid, this court GRANTS summary judgment for Intergraph.

SIGNED on March 16, 1999, at Houston, Texas.

s/ Lee H. Rosenthal
Lee H. Rosenthal
United States District Judge

Appendix D

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

CIVIL ACTION NO. H-97-1394

AMERICAN IMAGING SERVICES, INC.,

Plaintiff,

VS.

INTERGRAPH CORP.,

Defendant.

FINAL JUDGMENT

Based on this court's Memorandum and Opinion of even date, this court GRANTS defendant Intergraph Corporation's motion for summary judgment that plaintiff American Imaging Services, Inc.'s U.S. Patent No. 5,353,393 is invalid. This court enters judgment that the '393 patent, issued October 4, 1994, entitled "Apparatus and Method for Manipulating Scanned Documents in a Computer Aided Design System" is invalid under 35 U.S.C. §§ 102 and 103, because all claims of the '393 patent were anticipated and rendered obvious by the computer software program SuperPaint.

American Imaging Services, Inc.'s claims are DISMISSED with PREJUDICE. Each party is to bear its own costs.

Appendix D

This is a final judgment.

SIGNED on March 16, 1999, at Houston, Texas.

s/ Lee H. Rosenthal
Lee H. Rosenthal
United States District Judge

APPENDIX E — ORDER OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DENYING PETITION FOR REHEARING DATED AND FILED JULY 7, 2000

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

ORDER

Before LOURIE, Circuit Judge, GAJARSA, Circuit Judge, and LINN, Circuit Judge.

A petition for rehearing having been filed by the APPELLANT,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED.

The mandate of the court will issue on July 14, 2000.

FOR THE COURT,

s/ Jan Horbaly
Jan Horbaly
Clerk

Dated: July 7, 2000

AMERICAN IMAGING V INTERGRAPH, 99-1485
(DCT – 97-CV-1394)

APPENDIX F — RELEVANT STATUTES

35 U.S.C. § 102

§ 102. Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless —

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the

applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

AMENDMENT OF PAR. (E)

Pub.L. 106-113, Div. B, § 1000(a)(9) [Title IV, §§ 4505, 4508], Nov. 29, 1999, 113 Stat. 1536, 1501A-565, 1501A-566, provided that, effective 1 year after November

29, 1999, and applicable to all applications filed under section 111 of Title 35, on or after that date, and all applications complying with section 371 of title 35, that resulted from international applications filed on or after that date, and applicable to any such application voluntarily published by the applicant under procedures established under sections 4501 to 4508 of § 1948 [see Tables for classification] that is pending 1 year after that date, par. (e) is amended to read as follows:

(e) The invention was described in —

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the

filing of an international application filed under the treaty defined in section 351(a); or.

* * *

35 U.S.C. § 103

§ 103. Conditions for patentability; non-obvious subject matter

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

(b)(1) Notwithstanding subsection (a), and upon timely election by the applicant for patent to proceed under this subsection, a biotechnological process using or resulting in a composition of matter that is novel under section 102 and nonobvious under subsection (a) of this section shall be considered nonobvious if —

(A) claims to the process and the composition of matter are contained in either the same application for patent or in separate applications having the same effective filing date; and

(B) the composition of matter, and the process at the time it was invented, were owned by the same person or subject to an obligation of assignment to the same person.

(2) A patent issued on a process under paragraph (1) —

(A) shall also contain the claims to the composition of matter used in or made by that process, or

(B) shall, if such composition of matter is claimed in another patent, be set to expire on the same date as such other patent, notwithstanding section 154.

(3) For purposes of paragraph (1), the term "biotechnological process" means —

(A) a process of genetically altering or otherwise inducing a single- or multi-celled organism to —

(i) express an exogenous nucleotide sequence,

(ii) inhibit, eliminate, augment, or alter expression of an endogenous nucleotide sequence, or

(iii) express a specific physiological characteristic not naturally associated with said organism;

(B) cell fusion procedures yielding a cell line that expresses a specific protein, such as a monoclonal antibody; and

(C) a method of using a product produced by a process defined by subparagraph (A) or (B), or a combination of subparagraphs (A) and (B).

(c) Patentability shall not be negatived by the manner in which the invention was made. Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

* * * *

APPENDIX G — UNITED STATES PATENT NO. 5,353,393

[Omitted here but submitted separately as Lodging Appendix]